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EDITORIAL NOTE.

In entering on the work of the fourteenth volume of the *Bristol Medico-Chirurgical Journal*, the Editor is gratified to make the announcement that the Committee of the Bristol Medico-Chirurgical Society has authorised an enlargement of the *Journal* to the extent of sixteen pages in each quarterly number. It has not been thought desirable to make any alteration either in the form or the price of the *Journal*, but the Editor hopes that the addition of sixty-four pages in the year will enable him to make the *Journal* more truly a quarterly representative of the medical life and work of the West of England and South Wales than it has hitherto been.

To this end he has arranged with various representative subscribers to co-operate with the Bristol Committee by acting as local representatives in the principal towns of the district, and he has been able to secure the services of the following subscribers, each of whom undertakes to further the interests of the *Journal* in his own neighbourhood:—

Bath	Dr. Gilbert A. Bannatyne.
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INDUCED PREMATURE LABOUR IN CERTAIN DISEASES OF THE MOTHER NOT OBSTRUCTING DELIVERY.

BY

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DURING a practice of rather more than half a century, I have met with a number of cases requiring the induction of premature labour. In the present paper I propose to describe more particularly the diagnosis, symptoms, and treatment of cases, which illustrate the "necessity of inducing labour in certain diseases of the mother *not obstructing delivery*."[1] Since I have been in practice I have carefully recorded a total number of thirty-seven cases in which I found it necessary to induce premature labour. In twenty-four of these I had to do so on account of *strictly mechanical* obstruction to delivery, arising in nearly all from pelvic deformity. After making this deduction, thirteen cases are left, in which the continuance of pregnancy was rendered undesirable and dangerous by the presence of certain diseases and complications due solely to pregnancy, and not to any *obstruction* likely to cause difficult and dangerous labour.

Dr. Robert Barnes's masterly work, *Lectures on Obstetric Operations*, first published in 1870, has been to me a most useful guide and counsellor in obstetric difficulties of this kind. On page 378 of the fourth edition, 1886, Dr. Barnes gives a list of "certain cases of urgent disease of the mother, depending upon and complicating pregnancy—*e.g.*, obstinate vomiting, with progressive emaciation, and a pulse persistent

[1] This was one of the subjects for discussion in the Section of Obstetrics at the Bristol meeting of the British Medical Association in 1894. It was introduced by Dr. Robert Barnes. As President of that Section, I had little opportunity to do more than enumerate my cases.

for some days above 120; some cases of advancing jaundice, with diarrhœa; some cases of albuminuria, convulsions being present or apprehended; some cases of insanity or of chorea; hæmorrhages producing marked anæmia, especially if depending upon commencing abortion or placenta prævia; some cases of disease of the heart and lungs, attended with extreme dyspnœa; such are aneurism, great hypertrophy, valvular disease, œdema of the lungs, pleurisy." I propose now to go through the above list of maladies which necessitate the induction of premature labour, giving, as I proceed, illustrations of each from my own cases, together with a few comments. The first on the list is *obstinate vomiting*. This may appear at first to be nothing more than a morbid exaggeration of the ordinary morning sickness of pregnancy. But it is the most common and often the most obstinate of these affections, for it will frequently defy all other remedies but that of cutting short the pregnancy. My own statistics show that it is the most common, for no less than five out of my thirteen exceptional cases were of this kind. Moreover, it often causes more anxiety to the medical attendants than any other, for its dangerous nature is shown by the fact that in these five cases two mothers and three infants lost their lives. That it involves an excessive amount of responsibility arises from the circumstance that most of these cases, *e.g.* three out of the five, came on before the infant was viable, and therefore if not already dead, its life had to be sacrificed to save that of the mother. And this very fact adds very much to the risk of such labours. Every conscientious practitioner naturally feels the greatest repugnance to destroying the life of the fœtus by inducing abortion, and therefore postpones this disagreeable necessity as long as possible, too long sometimes to be compatible with the safety of the mother—as, for instance, when she is very nearly at starvation point, when irritative fever has ensued, and the pulse has risen persistently to 140 or more. When things have come to this pass, as Dr. Barnes remarks, "no organ in the body is capable of discharging its functions, for the pabulum of life is cut off at its very source. At this point labour, whether it occur spontaneously, as it often does, or be brought on arti-

ficially, comes too late. The tissues are altered, the powers are impaired beyond recovery, and death soon follows delivery." The first of my five cases of obstinate vomiting was unfortunately one of this kind.

CASE 1.—On December 3rd, 1862, Mr. Crossman requested me to see Mrs. A., a patient of his in the country at Mangotsfield, who was within a few days of her first confinement. For more than a week she had been suffering from obstinate vomiting, which no medicine would allay, accompanied with excruciating pain in the epigastrium on taking the smallest particle of food, and also the ejection of quantities of grumous blood, which made me suspect that a gastric ulcer was present. She could keep down but small particles of ice, and was in a state of extreme prostration. After a short consultation we both decided that the sooner labour was induced the better. On examination I found that I could just reach the os uteri and insert the tip of my forefinger in it, but it was high up and far back. There had been no labour pains of any kind. Wishing to bring on labour as quickly as possible, about 7 p.m. the same evening I punctured the membranes with a uterine sound, and let out a good deal of liquor amnii. We also injected into the rectum ʒss. of the ethereal tincture of ergot with a little gruel. Labour pains soon came on and returned regularly. During the labour we kept up her strength by giving small quantities of frozen cream, and also brandy. About 5.30 a.m. December 4th, she gave birth, after a ten hours' labour, to a living and tolerably vigorous male child. Soon after this there was some *post-partum* hemorrhage. It was a very moderate amount and was easily checked. Still, it left her in a state of extreme prostration. However, she had rallied considerably about three hours afterwards, when I left her in charge of Mr. Crossman and returned home. She went on tolerably well until December 7th, taking a fair amount of food and stimulants without rejecting any. On December 8th she was attacked with diarrhœa, which was not very severe, but depressed her very much, although it had been much checked during the two following days; but on December 10th, about 8 p.m., she fainted suddenly, did not rally, and died about 10 o'clock that evening.

The unfortunate issue of this case was very disappointing, and more to be lamented because everything appeared so favourable on the first two or three days after delivery. Her death, I think, was mainly due to increased prostration caused by the diarrhœa which set in on the fourth day, and added to the depression already produced by the very moderate amount of *post-partum* hemorrhage.

The next case has much resemblance to the last in its earlier features, but is on the whole more interesting and much more satisfactory in every way.

CASE 2.—On March 2nd, 1867, Mr. Burleigh requested a consultation with me on the case of Mrs. B., living in Stokes Croft, Bristol. She was a primipara about eight months pregnant, who had suffered

lately from incessant vomiting, which had defied all the usual remedies. This had become much worse during the night preceding, when she was in a most prostrate condition, at times almost pulseless, and constantly throwing up much coffee-ground vomit. When I saw her she was very little better, for the vomiting was urgent and the prostration excessive. There was a good deal of epigastric tenderness, and in the right epigastric region I felt a pedunculated tumour about the size of an egg, movable and very tender. This was attached to the fundus uteri and had probably by its pressure produced the gastric disturbance. We both considered that no time was to be lost, and decided on immediately inducing labour. On examining, I found the os uteri dilated to the size of a shilling, although there had been no labour pains, and I was able to feel an elbow presenting. I then began to dilate the os with one of Dr. Barnes's caoutchouc bags of the smallest size, but in so doing the membranes gave way. As the os uteri was now tolerably dilatable, I determined to attempt version by Dr. Braxton Hicks's bimanual method. This I effected without much difficulty. Having pushed up the elbow, I was soon able to grasp a foot which came down, and, before long, to extract the child, which was a male, alive and apparently vigorous for an eight months' child. It died, however, four days after delivery. The mother made a good recovery, the pedunculated fibroid descending with the uterus and giving no further trouble. The delivery occupied only six hours.

In these two cases it would be difficult to say, before labour commenced, which woman was in the worse condition. The depression was so extreme that life, in either case, seemed to hang on a thread. In the second case, fortunately no after-complications occurred as in the first, and the complete success which followed delivery was the best argument in favour of adopting this remedy when all others had failed. The presence of a tender pedunculated tumour growing from the fundus uteri and pressing on the stomach might possibly have tempted an enterprising young surgeon, with little obstetric experience, but much skill in abdominal surgery, to remove by a simple abdominal operation what was apparently the cause of all the mischief. This, however, would have inflicted an additional shock on a system too feeble to bear it, and might have failed in the result, and so might in the end have rendered it necessary to adopt the induction of labour as a last resource and under the most disadvantageous circumstances. Fortunately for the mothers, especially in the last case, the infants had both passed the seventh month of pregnancy, and were therefore viable. We had accordingly no conscientious scruples on *their* account to prevent us from expediting the delivery.

This, however, was not the case in the next example of obstinate vomiting which I had to treat.

Case 3.—On August 19th, 1871, Mr. Davies of Gloucester Road requested me to see Mrs. C., of West Street, Bristol, for most obstinate vomiting during early pregnancy. She had suffered very much from vomiting during her two previous pregnancies, but had gone her full time on each occasion. This time, however, the vomiting had been very violent, and had resisted most of the usual remedies such as prussic acid, oxalate of cerium, creasote, and morphia both internally and hypodermically. The vomiting returned every half hour, and she had scarcely kept down anything for several days, and was rapidly becoming more weak and exhausted. She was now about 3½ months pregnant. We first of all agreed to try the effect of keeping open a blister on the epigastrium and applying half a grain of morphia endermically. She was slightly better on the next day from this treatment, but on the day following there was no improvement, and as her case was becoming very critical, we determined to induce abortion. Accordingly, I introduced into the os uteri, through a speculum, a rather large tangle tent. On the next day this had induced no pains, but the os uteri was only enough dilated to admit the tip of the forefinger. I then introduced a tent of still larger size. About 7 p.m. on the same evening, Mr. Davies was sent for because she had some vaginal hemorrhage, together with labour pains. On arriving, he removed several clots and with them a dead fœtus of between three and four months' growth, and also a portion of placenta. On the next day I removed the remainder of the latter by means of an ovum forceps. The vomiting had much abated by that time, and before long had entirely ceased, and the patient did well.

In this last case, after giving all sorts of medicine and putting off the evil hour as long as possible, we were at last driven to bring on abortion to save the mother. I will give reasons for adopting this course, when I come to speak of another, but a still worse case, during still more early pregnancy (Case 5).

The next case was a very painful one, for the unfavourable result was mainly due to the patient's own fault:

Case 4.—Dr. Logan of Bedminster, Bristol, called me in to see Mrs. D., a multipara, residing in Bedminster. She had previously had seven children. Her former labours had been favourable and also her pregnancies. Unfortunately, during the last two years, in consequence of domestic trouble, she fell into a low, weak and hysterical condition; and to relieve such feelings had taken to drink immoderately, and in consequence had suffered from intense vomiting during the present pregnancy. I was first asked to see her on January 26th, 1877, when she was rather more than four months pregnant. I ordered her a mixture containing bismuth and creasote, and this had for a time a very good effect. But before two months were over the vomiting returned with increased violence, and she became so much worse that I was requested to see her again on March 16th, 1877, when she was rather more than six months pregnant. The

vomiting was then almost incessant, and she brought up large quantities of bile of a grass-green colour and could scarcely retain any food. Before seeing her, I had on the 11th of March ordered her to resume the bismuth and creasote mixture, and to apply a blister to the epigastrium and afterwards half a grain of morphia to the blistered surface. This caused relief for a time, but on March 16th I found that the vomiting had returned with increased violence, accompanied with increased exhaustion. Her condition was so precarious that, although the child was not quite viable, we decided to bring on labour without delay. About 11 a.m., March 16th, I introduced a large sponge tent, for I found the os uteri dilated enough to admit two fingers and the head, covered by the membranes, presenting. I was called up during the night, about 1 a.m., when Dr. Logan told me that he had removed the tent because labour pains were coming on rapidly—so much so, I found, that about 2.45 a.m. she gave birth to a still-born infant of between six and seven months' development. The labour was followed by great debility, without any apparent cause, which increased so rapidly that she died about 5 a.m. on the following day.

On reviewing this case there can be, I think, no doubt that the intemperate habits to which the patient had lately given way were the principal cause of the fatal termination. When I began to induce labour I found the os uteri already open enough to admit two fingers, just as if labour had commenced already; and the child, when born, looked as if it had been dead for some hours—just as if Nature had made one last expiring effort to promote its expulsion.

In Dr. Barnes's[1] address at the Bristol Meeting there is an excellent passage so applicable to this case that I cannot refrain from quoting it. "Vomiting," he says, "is most severe when it sets in with severe mental shock or distress; when there is gloomy depression passing into despondency. Such cases, may run rapidly to a fatal issue, resisting all treatment even the induction of labour. Toxæmia soon complicates the case, even when the embryo lives. First, there is starvation giving strong impetus to the process of absorption; secondly, no adequate nutrition being supplied from without, the system feeds upon itself. There is rapid disintegration of tissue, most marked in the fat; so the blood is degraded and empoisoned. . . . At this point labour, whether it occur spontaneously, as it often does, or be induced artificially, comes too late. Death soon follows delivery."

My last case of this kind was an example of vomiting of

[1] *Brit. M. J.*, 1894, ii. 1419.

the most obstinate and irrepressible kind, occurring in early pregnancy.

Case 5.—On February 6th, 1891, Dr. Long Fox and Dr. Aust Lawrence asked me to consult with them on the case of Mrs. E. She reckoned herself to be about three months advanced in her first pregnancy, but for more than a month had suffered from the most urgent vomiting, which had resisted all the usual remedies, so that she could not keep down even milk and lime-water nor any of the various peptonised foods. A few days before I saw her, Dr. Fox had consulted with Dr. Lawrence, who tried, with apparently good effect at first, Dr. Copeman's plan of dilating the os uteri and using for that purpose Hegar's dilators. But as there was no well-marked improvement, I was consulted as to the advisability of ultimately inducing abortion. When I saw her I found her emaciated to an extreme degree; pulse about 115; temperature a little above normal; vomiting not quite so urgent; uterus anteverted more than usual during early pregnancy, with a rather sharp bend at the os uteri internum. As there was some mitigation of the sickness, we decided to wait a day or two longer before resorting to such an extreme and responsible step as the induction of abortion; we, therefore, ordered an opiate enema. On the next day we found that she had slept a little better and could keep down a little milk. On the day following, however, Dr. Fox and I found her much worse; she had passed a sleepless night; vomiting very urgent; pulse 120 and occasionally intermitting; temperature 97°; tongue, dry and brown. Unfortunately, Dr. Lawrence was prevented from meeting us by another engagement at a distance, and her condition was so anxious that we both agreed that labour should be brought on without delay. I therefore passed, completely into the uterus, a medium-sized tangle tent, which I had previously moistened and bent to the right angle to enable it to pass the sharp curve in the cervix uteri. This I left *in situ* for twenty-four hours. On calling the next morning we found that the tent had dilated the uterine neck and straightened it, and that there was some show, but no labour pains; the other symptoms, if anything, not so urgent. I therefore inserted a larger tent, which I also left *in situ* twenty-four hours. On the next day, February 10th, I found that there had been more show, but no labour pains. The os, however, was fairly dilated. I then introduced a tolerably large sponge tent, intending to leave it for twelve hours; but I had not been absent more than eight hours when I received an urgent message from her husband, stating that she had had a succession of sharp pains with a good deal of bloody discharge. On arriving at the house he told me that the sponge tent had been expelled and also the fœtus, which I saw. It was about an inch long and had a flattened, collapsed and macerated appearance as if it had been dead for some days. As no more of the ovum had been expelled, I introduced two fingers and removed the secundines, which had nearly passed through the os uteri. The membranes were rather thickened, and the placenta was not quite fully formed. From the development, I should consider that the ovum had not quite reached three months' growth. I then gave her an opiate and washed out the vagina with warm water and Condy's fluid. On the next day I found that she had passed a good night, that there had been no more vomiting, and that her appetite was returning. Pulse 104; temperature normal. From that time she soon got better, and made a good recovery; but it was a long time before she again regained her strength.

This case was one of unusual urgency at so early a period of pregnancy. It is therefore important, for it impresses on one's mind the fact that at such times "delays are dangerous." The state of the fœtus when expelled appeared to show that the extremely critical condition of the mother, who may truly be said to have arrived at "death's door" when this happened, had already, some days previously, destroyed the vitality of the embryo. And thus from a laudable desire to save the frail life of the embryo, which is probably already dead, one *may* be tempted to defer active measures too long, and at last lose the life of the mother also. As Dr. Barnes most judiciously remarks, "We must be careful not to be deluded into pursuing the policy of expectancy too far. The transition from physiology to pathology is often insidious or sudden." And again, "The strictly medical treatment of the difficulties that complicate pregnancy is often delusive. We must not defer too long an appeal to the decisive intervention of surgery."

On taking a retrospective glance at my notes of these five cases, I cannot help thinking that, in Nos. 1 and 4, an earlier interference of a decisive kind, in accordance with this excellent advice of Dr. Barnes, might possibly have secured a better result for the mothers. This refers especially to No. 1, in which case the infant was saved, because it was not only viable but very near the full term. But in most of the cases like those I have related, there are two evils to be avoided, a greater and a less; the former being the death of the mother, and the latter of the infant. They stand like two rocks ahead, either of which is to be avoided if possible, but especially the greater. And to steer clear of both will require the combined skill and experience of at least two thoroughly competent pilots.

(To be continued.)

PELZER'S METHOD OF INDUCING LABOUR.

Dr. B. M. Hypes (*American Journal of Obstetrics*, December, 1895) says that Pelzer's method of inducing labour by intra-uterine injections of glycerine should be abandoned or the dosage reduced, especially in subjects with prior existing kidney affections.

A useful summary of many articles on Pelzer's method is given in the *Medical Chronicle* for February, 1896.

THE USE OF ALCOHOL FROM A MEDICAL STANDPOINT.[1]

BY

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THE occasional opportunity of rubbing shoulders over well-worn paths can only be for mutual good. We are apt to lapse into the fatal insecurity of imagining that our views on a certain subject are fully formed and crystallised and that our knowledge is sufficiently complete; and it is only by renewing our acquaintance with old facts that we are brought to our knees to realise how much we have forgotten, and, in fact, how much there is that we never knew before.

In discussing the medical uses of alcohol, first and foremost we must have a basis on which to build our assertions, and it is therefore necessary that its physiological action must be first considered.

Lauder Brunton says that the study of the physiological action of alcohol "is undoubtedly a difficult task, and one which we cannot at present hope to accomplish perfectly. All that we can do is to take the facts we find and arrange them to the best of our ability, trusting to future research for information on those points of which we are now ignorant. In doing this we must bear in mind that alcohol has a threefold action. 1st. Its local action on the skin or mucous membrane with which it comes in contact. 2nd. Its reflex action on other organs, through the sensory nerves of the skin or mucous membranes. 3rd. Its action on the brain, spinal cord, and other organs to which it is conveyed by the blood. . . . Thus, if we moisten the skin with pure alcohol . . . and allow it to dry spontaneously, a decided sensation of cold will be produced. . . . This cooling action is due simply to the

[1] Read as the introduction to a discussion at the meeting of the Bristol Medico-Chirurgical Society on January 8th, 1896. A report of the discussion will be found under "Meetings of Societies."

volatility of alcohol, which during its evaporation abstracts heat from the skin and cools it down. If pure it evaporates quickly and produces much cold, but if mixed with much water the evaporation . . . is too slow to produce any marked result. . . . If, instead of allowing it to evaporate spontaneously, we prevent evaporation altogether by covering the moistened skin with gutta percha tissue, instead of coolness we get a burning feeling. . . . We have got rid of the action which alcohol owes to its volatility, and we have brought into play another which it owes to its chemical properties. So long as it could evaporate readily it acted almost entirely on the epidermis, but when evaporation is prevented it soaks through the epithelium and acts on the vascular tissues beneath. This is better seen if, instead of applying the alcohol to the skin, where the epidermis presents a considerable resistance to its passage, we put it into the mouth, where the thinner epithelium offers less obstruction. Almost immediately after its introduction we experience a burning sensation, which increases for a little while and then gradually diminishes. . . . The mucous membrane changes its character and becomes whiter, more opaque, and somewhat corrugated. . . . Both the sensation of burning, and the visible alteration in the mucous membrane, are due to the action of the alcohol upon the tissues."[1] The warmth is produced by the increase of the local circulation, and the whiteness to the coagulation of albumen. This coagulation is more or less lasting according as the alcohol has been acting for a greater or smaller length of time. "The simple experiment of putting a little brandy into the mouth is instructive not only by showing us the local changes which alcohol produces in the mucous membrane, but by reminding us of the second kind of action which alcohol exerts, viz. reflexly through the nervous system. At the same time that the burning sensation is felt, the saliva begins to flow copiously into the mouth. The alcohol has not come into contact with the salivary glands at all, but through the sensory nerves of the mouth it has acted on the nervous centres, and through them upon the vessels and secreting cells of the gland."[2]

[1] *On Disorders of Digestion*, 1893, pp. 141–2. [2] *Op. cit.*, p. 143.

If, instead of allowing the alcohol to linger in the mouth, we swallow it, the same sensation of warmth is felt along the course of the œsophagus and in the stomach as well. The action of alcohol upon the stomach, both locally and by reflex action through its nerve-supply, is most important. And it is here that the important experiments made by Dr. Beaumont upon Alexis St. Martin are so valuable. He found, by observing the mucous membrane of the stomach through the fistula, that the introduction of a little alcohol caused a dilatation of the local blood-vessels, with a corresponding increase in the rosy tint of the surface. The glands began to secrete copiously, beads of gastric juice standing out upon the surface, eventually coalescing and running together in a stream. With this increase in the flow of gastric juice there was a corresponding desire for food; in fact, the experiment had produced an appetite. The movements of the stomach were increased, and we can readily understand how this would assist the mixture of food with the gastric secretion and accelerate digestion, at the same time assisting in the expulsion of gases and the passage of food into the duodenum.

By gradually increasing the quantity of alcohol in the stomach it is possible to produce quite a contrary effect: the rosy tint gives way to pallor, the mucous glands are roused to greater activity, mucus coats the surface, and eventually nausea and vomiting are produced.

We now come to the reflex actions produced by alcohol in the stomach. If a poisonous dose of alcohol be swallowed, the individual falls immediately into a state of unconsciousness from shock; or, as Sir Benjamin Brodie explained it, the alcohol has acted upon the heart and vessels, much in the same way as a blow upon the epigastrium. "He found that a somewhat small dose of alcohol injected into the stomach of a cat knocked it down senseless, and in this condition it remained for about eight minutes. Then it recovered and walked about. There was no time here for the elimination or for the destruction of the alcohol in the system, and consequently this effect which passed off so rapidly could not be due to the presence of the drug in the blood, and must be attributed to its action upon the stomach before absorption. But when larger quantities were

given the animal did not recover in this short time. Then the primary shock lasted so long that before it passed off absorption had time to take place, the alcohol having found its way into the blood was carried by it to the nervous centres, acted upon them, and the shock passed into alcoholic coma. While large doses thus paralyze the heart more or less completely, moderate doses stimulate it to act with increased rapidity, and at the same time with increased force."[1] This reflex action of alcohol upon the heart through the stomach is a most important one, for it is by this action that circulation is restored when, from syncope or other cause, it has nearly ceased.

We now proceed one step further, and trace the effects of alcohol upon the body after its absorption into the blood. We will first consider its action upon the blood itself, and then upon the tissues, directly or indirectly, as it is conveyed to them by the circulation.

It has been found by experiment that strong alcohol injected into the veins causes a coagulation of the blood; it is therefore only with dilute alcohol that we have to deal, as the effect of a local coagulation in the veins of the stomach or intestines would be to effectually bar its further progress. This diluted alcohol first comes into contact with the corpuscles of the blood, and it has been found that the amœboid movements of the white corpuscles are first increased and then diminished; but whether this effect or any other has any practical import or not has not yet been determined. Its chemical action upon the red corpuscles has, however, been carefully determined. George Harley and Schmiedeberg have found that it lessens their power of giving off oxygen.[2] Dujardin-Beaumetz, as the result of his own experiments, says: "In the blood you bring together two bodies, one alcohol, eager for oxygen, the other hæmoglobin, ready to give up that oxygen under the feeblest influence, even that of an inert gas, and you imagine that no exchange takes place between these two bodies. Such changes *do* take place; alcohol, under the influence of hæmoglobin, is transformed into acetic acid. A portion of the alcohol ingested undergoes combustion at the expense of the

[1] Lauder Brunton, *op. cit.*, p. 149. [2] See Lauder Brunton, *op. cit.*, p. 150.

oxygen of the hæmoglobin of the blood globules. When alcohol is introduced into the economy in non-intoxicating doses, it is in part oxidised, and transformed, first, into acetic acid, then into alkaline acetates, and finally into carbonates."[1]

That alcohol is thus oxidised we may safely assume as an established fact which rests upon a basis of most careful and oft-repeated experiment. Moreover, by observation upon the elimination of alcohol from the body we have corroborative evidence of these statements. Baudot found that only a small fraction of alcohol ingested was excreted by the kidneys. Anstie, Thudichum, Dupré, and Schulinus also confirm the fact that only a fractional portion is eliminated. Lallemand, Perrin, Duroy, and Subbotin, on the other hand, published experiments showing that a goodly proportion was actually excreted from the body; but they used very large doses, more, in fact, than could be oxidized in the time. If we are right in accepting this fact of oxidation, we must admit the title of alcohol to be ranked as *a food*. If it be oxidized it will supply energy for muscular exertion or for maintaining animal heat, or for both. Whilst if it be excreted unchanged, it can only be classed with substances which, after acting on the nervous and muscular systems whilst circulating in the blood, pass out after a while through the eliminatory organs. Moreover, Dr. Hammond, in his *Physiological Researches*, says that when he himself took an insufficient diet and was daily losing weight, the addition of alcohol not only prevented this loss of weight but converted it into actual gain. Dr. Anstie, in his work on *Stimulants and Narcotics*, has collected a number of cases in which persons have lived for a considerable time upon alcohol alone, or along with a quantity of food so small as to have been utterly inadequate without it.[2]

We will now carry this blood along with the circulation to the tissues of the body. It is laden with this energy-giving oxidized alcohol, but, at the same time, the hæmoglobin has been robbed of oxygen, and consequently has less to hand over in the process of tissue-combustion: the process of oxidation in

[1] Burney Yeo, *Food in Health and Disease*, 1889, p. 121.

[2] See Lauder Brunton, *op. cit.*, pp. 152–3.

the tissues must necessarily be lessened. Now, although a certain amount of heat has been generated by the previous process in the blood itself, we now have to face the fact that less animal heat must of necessity be formed in the usual manner, and consequently, instead of alcohol actually adding to the temperature of the body, we may, by decreasing the normal chemical activity at the terminals, actually counterbalance this increase with a diminution of temperature as determined by the thermometer. This diminished oxidation of the tissues is, however, not the only method by which alcohol lowers the temperature of the body, for, as we shall presently see, the inhibition of vasomotor influence in the skin by alcohol leads naturally to dilatation of the superficial capillaries, and with this an irradiation of heat into the air. And in speaking of this action of alcohol upon the heart and vessels, I cannot refrain from giving *verbatim* an excellent word-picture of Lauder Brunton. He says: "One of the best possible opportunities of studying the earlier and slighter effects of alcohol is afforded by a public dinner. If we look at our own hands or those of our neighbours before going in, especially if the ante-room is somewhat cold, we may find them somewhat pinched-looking; the colour somewhat dusky and distributed in patches instead of being uniform; the veins very thin, almost like threads. They are of a somewhat dark blue colour, and on emptying them by pressure they fill very slowly, showing that the circulation is languid. After a few glasses of wine, however, their appearance begins to change. The hands now assume a uniform rosy tint, showing that the capillaries are now dilated and filled with bright arterial instead of dark venous blood; the veins swell up, become prominent, of a light blue colour almost like arteries, and when emptied by pressure fill rapidly, showing that the circulation has become very quick, and that they, like the capillaries, are now filled with blood which is tolerably bright, if not quite arterial, instead of the dark blood they previously contained. The hands entirely lose their shrunken look, little wrinkles in the skin disappear, indeed the hands become larger than usual, or, as my neighbour at a dinner-table once expressed it, they become 'podgy,' from the amount of blood and inter-

cellular fluid in the vessels and tissues; and rings previously loose become almost too tight. This dilatation of vessels, so readily seen in the hands, is not confined to them, but occurs generally throughout the body. The warm blood pouring from the interior of the chest and abdomen over the surface imparts to it a pleasing glow, and a most agreeable feeling of comfort pervades the whole frame. The face shares the general flush, and the pulsation of the temporal arteries not unfrequently becomes easily visible. The current of blood throughout the body is more rapid than before, and this rapidity does not depend simply on the dilated vessels offering less resistance to the current of the blood. No! the alcohol has stimulated the accelerating nerves of the heart, which cause it to pulsate not only more rapidly but more powerfully. . . . Here we have one at least of the most important conditions for the nutrition of all the tissues. The slight diminution in the oxidizing power of blood which alcohol occasions is many times over compensated by the amplitude of its current, and, as this is flowing rapidly through the tissues, bringing them new food and carrying off their waste products, is it any wonder that they work with more than usual vigour? The muscles acquire new strength; the work which previously fatigued them is done with ease; the mental faculties become much more acute, and new ones, previously unsuspected, may even appear. The merchant will be able to drive a harder bargain, the student will solve the problem which previously baffled him, the man who tries with difficulty to speak in a foreign language finds his stammering disappear and his tongue run on with ease, the melancholy man may sing a merry ditty, and the sedate man, whom no one would ever have suspected of such a thing, may succeed in making an excellent joke. Provided the liquor has been good, or, in other words, provided the alcohol employed has been free from all injurious admixture, all these effects, I believe, may be produced, and may pass away without any bad effects."[1]

This little sketch shows us in the most graphic manner the action of a reasonable dose of alcohol upon the heart and circulation generally. The whole vascular system is excited to

[1] *Op. cit.*, pp. 153–5.

more vigorous action, the circulation is accelerated, and the dilatation of superficial vessels gives rise to a subjective feeling of warmth: the brain and nervous system, invigorated with a larger supply of blood, act with greater alacrity, and the individual experiences a sensation of exhilaration and general well-being. Following upon these sensations there comes a reaction, the magnitude of which depends upon the individual, characterised by lassitude and drowsiness, which generally lasts longer than the previous state of excitement. This exhilarating effect upon the brain is in the main due to the invigorated circulation; but if the alcohol be pushed beyond a reasonable limit, we have to reckon with its direct action upon the nervous tissues themselves. There is first of all an inhibitory effect upon the highest centres—the brain acts unfettered by the control of judgment; the individual is unmasked and betrays his true colours; passions and emotions which before were in the background now appear on the surface; and as the motor centres of brain and spinal cord are one by one affected, the picture of alcoholic intoxication is completed.

And now having refurbished our memory, let us see how far these physiological facts correspond with clinical experience. And here it may be as well to remind ourselves that the physiological action of a drug, as determined by experiment, is by no means always commensurate with its therapeutic value; and alcohol is no exception to this. A guinea-pig may be the same as a man to the physiologist, but a cow will not do instead of a countess for *our* purpose. Or, as Moxon[1] puts it: To a physiologist a Queen's Counsel and a potman are alike. He will dissect and decompose the one as easily as the other, and tell both their oxidations up in foot-pounds; but he overlooks the unseen differences which evade scalpel and retort, and which are the very order and stability of human life.

Putting this factor of idiosyncrasy quite on one side, we must always remember that the action of a drug on tissues in health may be quite different in acting upon those tissues when the subject of disease; and whilst admitting that the scientific

[1] *The Alcohol Question*. By Paget, Brunton, and others. Second Edition. [N.D.], p. 98.

basis is the only sound one on which to practise our art, still we must admit that our value as practitioners is heightened when we add to that knowledge the light of experience. For instance, if alcohol is to accelerate the heart's action, to hurry along the pulse whenever it is given, we ought never to give it in a case of fever; and yet we know full well this is not so. In cases of pyrexia of asthenic type we prescribe alcohol freely, with every hope of slowing the heart's action, and if this hope is not realised we do not feel happy as to the prognosis of the case; in fact, to persist with it under such circumstances is a therapeutic error. The explanation of this retarding influence on the pulse is still a debatable point. By diminishing oxidation and retarding combustion it may have some effect, but the steadying of the pulse is out of proportion with the diminution of temperature. Possibly its effect on the vagus may in febrile conditions outweigh its effect on the accelerator nerves of the heart; and we must not forget a possible antiseptic effect upon the toxic products that already are urging on the heart to rapid action.

Again, in delirium, with the brain already in an intensely excited condition, it might be thought that to give alcohol under such circumstances was only adding fuel to the fire; but what is its effect? In delirium, combined with quick pulse and failing powers, we possess in alcohol a most important sedative, and in such conditions it must of necessity be prescribed. Even in *delirium tremens* in a vigorous man, we all know how much more certainly a dose of chloral will act if administered in a glass of bitter beer.

I do not wish it to be understood by these remarks that I would in *all* cases of fever give alcohol as a routine remedy. Many cases do quite well without it, in fact never want it; but what I do say is, that if nourishment be not taken, if the pulse shows the slightest inclination to abnormal rapidity and weakness, if there be the least indication of an idly moving tongue or the least suspicion of brain-weakness, then I say alcohol should not be withheld. I do not advocate waiting until the pulse is 140, the tongue is brown, and delirium only too manifest. Again a practical point: in a case of fever in a patient of middle life, or

past that, I always think that previous habits should be taken into account. If to your knowledge that patient has been accustomed not necessarily to live freely, but only to take a moderate amount of alcohol as a daily beverage, then I should say by all means give that man alcohol from the first. He will need it sooner rather than later, and you had better be beforehand.

And now a few words on the influence of alcohol on the digestive tract. A robust and healthy man needs no alcohol either to sharpen his appetite or assist his digestion; but one whose vital energies are low either from being below par merely or convalescing from a severe illness, is all the better for a glass of wine. Nobody knows so well as a doctor how, after a long and arduous day at high pressure, the mere *thought* of food is distressing. He comes in weary both in body and mind; he flings himself down in a state of exhaustion; he is done up. He makes comments about "a dog's life," and all the world is wrong. Ask him if he is ready for dinner and hear what he says. But let him sit quietly in front of the fire and give him a glass of champagne, and what happens? He brightens up, he pulls himself together, changes his raiment and comes down to dinner with an appetite. The alcohol has done him good. Whether he is justified in repeating this sort of thing often is quite another story. But the contingency *will* arise sometimes, and this to my mind is the best way to meet it. To meet the feeble digestive power of the convalescent, a glass of generous port, or, if there be any tendency to nausea, a glass of champagne, is of great service.

In cases of colic and diarrhœa we all know how men prescribe for themselves port wine and brandy. The brandy acts as a sedative to the irritated nerves of stomach and intestines, whilst the astringent effect of the port is of service in allaying intestinal secretions. This occasionally suffices, but as often as not is useless, and it is as well to issue a word of warning on this point to our patients.

A man, after he has got to his business, is seized with an attack of "gripes," and immediately sends for and takes a stiff glass of brandy. He is perhaps temporarily relieved, but

shortly he is as bad as ever. He then either comes round to see you or sends a messenger, and you find him in great pain, and, moreover, cold and miserable. The physiological action of alcohol has here been too much for him. The radiation of heat from his dilated skin capillaries has been sufficient to chill him severely; this, combined with the depressing effect of pain, has been too much for him, and you would do well to get him home and into a warm bed as quickly as possible. Had he taken the dose at home, in front of a good fire, he would probably have been spared all this, and the alcohol would have done him good.

The astringency of the red wines is well known, and in cases of irritable diarrhœa in middle-aged men, I have often found that a couple of glasses of red hock with luncheon have proved of great service.

The therapeutic value of alcohol in complaints of the genito-urinary system I will dismiss in a few words. We must be very cautious in our advice here. Gin with its juniper is known the wide world over as an excellent diuretic, and it is marvellous how inevitably it is taken when there is anything wrong imagined to be with "the kidneys." Even in our house-surgeon days we remember how every patient with retention of urine came in with his agony doubled after a liberal dose of gin "to make the water come." There are other diuretics to our hand, and I seldom, if ever, prescribe it for that purpose.

In women, who suffer from dysmenorrhœa and from pelvic pains, imaginary or real, the use of gin is unfortunately only too common, and we are skating over thin ice indeed in giving our sanction to its use. For my own part, I invariably discountenance it, and I have never regretted doing so.

It is not within the scope of my paper to wander off into the special action of alcohol in such general diseases as anæmia, chlorosis, diabetes, albuminuria, and so on, although there is much that is of vital interest to talk about in such matters; nor do I propose to even touch upon the pathological effects of chronic alcoholism.

One point with regard to anæsthetics. I never could see the rationale of mixing alcohol with chloroform and ether in the

A.C.E. mixture. Personally I never see any objection to giving a dessert-spoonful of brandy by the mouth before administration of an anæsthetic, just to give a little "Dutch courage," but from its volatility I doubt its good effects.

I must now hasten on, for time presses, to the discussion of alcohol as a beverage. To my mind, in the course of general practice, our advice on this point requires a *wise discretion*. Men who seek our counsel are more often than not possessors of the common-sense view on this matter, and woe betide our reputation if we are entrapped into a display of worldly ignorance. Once let a patient see that your knowledge of alcoholic drinks is shaky, and his confidence in you will experience a rude shock, and your control over his future alcoholic habits will be lost, for he will pursue his own course. That men *will* indulge in alcoholic drinks we must all of us admit, and the more we know of our subject the better shall we be able to guide them in that indulgence. A healthy man (and here I think we shall all agree) certainly does not require alcohol, but I am quite prepared to say that to partake of it as a luxury in moderate quantities is not fraught with any harm. Now moderation is a dangerous word, and has a different interpretation in various minds. For instance, we none of us could agree with the definition of moderation expressed by a young man who came to my consulting room the other day. I asked him how much drink he had taken in the course of the morning, and he replied, "Oh, nothing much!" but on being pressed, admitted that he had had seven glasses of whisky and two glasses of beer: and we could not allow ourselves to fall in with the view of the Scotchman as to moderation, who, after detailing the manner in which he disposed of thirteen glasses of whisky in the course of the day, said: "I canna understand a mon dram, dram, dramming all day long." No! the amount of alcohol that can be taken with impunity in twenty-four hours should be fixed; and we may safely agree with Parkes, who puts the limit at 1 to 1½ ounces of the absolute spirit in any given day. This corresponds to a sherry-glassful of brandy or whisky, to one pint of average beer, to two glasses of port or sherry, or to half a pint of claret. These data are trustworthy; and if a man will only adhere to these daily

quantities he will come to no harm. If they be exceeded it should only be along with food at an occasional dinner party, that exquisitely refined debauch beginning with its glass of fortified sherry and ending with its cup of *café noir* as an antidote.

In recommending the particular drink that will suit an individual, we should certainly insist that the liquor be *good*. It is more important to recommend a wine merchant than to name a wine. In giving our advice we need not assume to ourselves the title of a *connoisseur;* but at any rate, we should be in a position to point out the relative values of different beverages under different circumstances. We should understand the relative values of red wines as compared with white, of effervescent wines as compared with still; we should know which beverages are most astringent and which most tonic; and we should have in our minds a clear knowledge of the meaning of such adjectives as *mature*, *fine*, *fruity*, *fortified*, *dry*, and *sweet*; and we should remember the rule that any liquor that retards the action of the kidneys must be avoided. In addition to these, we must count upon the factors of idiosyncrasy, hereditary failings, season of the year, present need, and length of purse.

There is as much dietetic folly in shabby gentility drinking bad claret as there is in a labourer drinking cheap gin. In each case the individual would fare far better on a glass of good wholesome British beer. Whatever beverage is recommended this rule is paramount—it should be good; and if the individual cannot afford that which is reliable, he is better without it altogether.

I should have liked to pursue in more detail the relative merits of the various alcoholic drinks, but time will not permit me.

To hold up to condemnation the immoderate use of alcohol, and to discuss the means whereby such abuse may be fought, is not our province to-night. I have only set myself the task of laying before you a few points for discussion of its *reasonable* usage. That alcohol is of use I have no doubt, and it is only by keeping ourselves abreast of the knowledge of our subject

that we can guide our patients aright. If in the administration of our advice we are armed with this knowledge, and ever keep before our eyes the consciousness of the ultimate welfare of our patients, we may, by resolutely endeavouring to keep them within the limits we have prescribed, do more to stem the tide of intemperance than possibly we are aware.

TWO YEARS' EXPERIENCE OF THE OPERATION FOR STRANGULATED HERNIA AT THE BRISTOL GENERAL HOSPITAL: AND ITS LESSONS.

BY

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THE statistics of operations for strangulated hernia at St. Bartholomew's, St. Thomas's, and Guy's Hospitals up to 1884[1] show a mortality of 43 per cent.—a death-rate which, as Mr. Bowlby says, is greatly higher than is generally supposed. During the last ten years Mr. Bowlby has found that the mortality at St. Bartholomew's has been 35.8 per cent. He[2] attributes the still high mortality of the antiseptic period to delay. He thinks patients die from exhaustion, from the compulsory starvation of several days' duration, and the vomiting and pain, and hardly any from the operation itself. After three or four days' strangulation he considers the chances of recovery are but small. Some very valuable statistics bearing on this point have been worked out by Macready[3] from 129 of Reichel and Hagedorn's cases, all operated on aseptically:

12.5	per cent.	died after	one day's strangulation or less.
26.1	,,	,,	two days' ,,
36.3	,,	,,	three days' ,,
44	,,	,,	four and five days' ,,

[1] *Lancet*, 1893, i. 1221. [2] *Loc. cit.* [3] *A Treatise on Ruptures*, 1893, p. 365.

He says: "The facts concerning the danger of delay have been long recognized by hospital surgeons, but that they have not yet reached all branches of the profession is evident from the heavy mortality still attending the operation. The patient who dies after twenty-four hours of strangulation, in most cases owes his fate to the negligence of his surgeon, and the latter, when he ventures to postpone the operation, is accepting a grievous responsibility."

During my first two years' work as surgeon to the Bristol General Hospital, I operated on twelve cases: two of these died, because they were sent in too late; all the others recovered. One of the fatal cases was so collapsed, I dared not give an anæsthetic, and operated under cocaine; the other was an aged woman who was sent in after a week's strangulation, and had not the vitality to recover.

Most surgeons would try taxis before operation, unless they had reason to fear gangrene of the bowel, and I have always done so, but never for long periods of time, believing prolonged taxis to be distinctly a dangerous proceeding, as likely to seriously bruise the distended bowel—even produce rupture of one or more of its coats—or bring about perforation of one of those small ulcers which are apt to form at the line of constriction. I generally try taxis for two or three minutes only before anæsthesia, and again for two or three minutes under anæsthesia, before operating; and often an ice-bag has been applied to the hernia during the interval between the patient's admission and my arrival at the hospital. In late cases where I had reason to suspect a serious condition of the bowel, I did not employ taxis. The ice-bag has not been successful in most of the cases under my own care; but I can record one very striking illustration of its value. A young man was admitted with a fairly large and recently strangulated inguinal hernia. I saw him before he went up to the ward, and tried taxis, but failed. When I saw him again, after having had an ice-bag on the rupture for one hour, the bowel had spontaneously slipped back. It was a very early case, the onset of symptoms being only five hours before admission.

I am, however, inclined to agree with those who think that

if an ice-bag is used at all it should only be employed quite early in the case, within the first few hours; for, looking at the fact that gangrene begins very early in some cases, it seems to me a distinctly dangerous proceeding to apply intense cold to a coil of bowel the nutrition of which may be doubtful.

In several of my cases the bowel was tightly constricted by the ring, but only partially, *i.e.* only the uppermost coil in the ring, which was in contact with the sharp edge, was nipped, and the coil, passing through underneath, escaped, the constricting band being the uppermost portion of the ring only. In most cases of strangulated hernia the furrow on the bowel is most marked at one part, where the sharp edge of the ring has nipped it; but in these cases the undermost portion of bowel could hardly be said to be strangulated at all. In case No. 12 the finger could be passed into the abdomen through the ring (before its division), though the coil immediately beneath the sharp upper margin was deeply grooved by it, and I could hardly get my nail between the sharp margin of the saphenous opening and the bowel to act as a director for the introduction of the hernia knife. This condition of the hernia accounted for the fact that during taxis part of the hernia got very soft and part hard, for doubtless the fluid in the sac went back into the abdomen under pressure and left it softer, with thickened œdematous coils of bowel palpable. It is not, of course, meant that the ring was not completely occupied by the gut in this case, but that the finger easily passed between the bowel and the lower boundary of the ring by displacing the gut. In another case (No. 5), although the small bowel was much congested and grooved by the sharp upper margin of the external ring, against which it lay, yet beneath it the colon and a large mass of omentum passed out, and showed no signs of strangulation, and my finger could be passed into the abdomen, before division of the ring, underneath the bowel and omentum.

The remarkable pallor of the bowel associated with such marked œdema in the case of the old man of eighty-five (case 12) is very interesting. The constriction was very great, the sulcus being well marked where it had been nipped. It is an

CASES OF STRANGULATED HERNIA.

Name, Age, and Date.	Form of Hernia.	Duration of Strangulation.	Symptoms, &c.	Amount of Taxis.	Condition Found on Operation.	Condition after Operation.
1. M. K. 63. Female June, 1893.	Fem.	48 hours	Hernia for 4 years. Did not go back at night. Never wore truss. No increase in size lately. Vomiting for 48 hours. Said to have been fæcal for last 24 hours. No passage of fæces or flatus for 48 hours. Much pain in abdomen on second day. Local signs of strangulation except tension.	For doubtful time before admission and for a few minutes after.	Chocolate-coloured fluid in sac, and plum-coloured bowel, and omentum. Two ounces latter removed. Constriction at deep crural arch. Banks's radical cure.	Vomited before coming round from anæsthetic, and this was fæcal. Flatus passed in twelve hours. Bowels open on seventh day. Wound healed on eleventh. Discharged six days later.
2. S. A. B. 58. Female. Dec., 1893.	Fem.	16 hours	Ruptured many years. Never wore truss. Came down 46 hours before admission and could not be returned. Vomited three times. Abdominal pain. No flatus passed. All local signs of strangulation.	Ice-bag for three-quarters of an hour. Taxis for a few minutes before and again under anæsthetic.	Sac looked very black, and on opening it dark blood came out. Bowel very congested. Constricting band probably Hey's ligament. One-and-a-half ounces omentum removed. Banks's radical cure.	Diarrhœa came on on third day, and some suppuration in the wound was noticed. Diarrhœa ceased, and abdominal distension set in, and by the seventeenth day fæcal discharge from the wound was observed. This almost ceased, but distension of the abdomen became marked, though the bowels were open regularly and there was no sickness. The distention continued, and five months after operation an attack of complete obstruction set in, with visibly distended coils. This was relieved by passing a tube into the fæcal fistula After this, with very careful dieting, she remained very comfortable, hardly any discharge took place through the fæcal fistula and the abdominal distension diminished, and she was able to go about.*

* I saw this patient in September of last year. She was looking so well I hardly recognised her. The fistula had quite closed and there was no abdominal distention, but she had occasional attacks of abdominal pain and vomiting lasting some hours.

Name, Age, and Date.	Form of Hernia.	Duration of Strangulation.	Symptoms, &c.	Amount of Taxis.	Condition Found on Operation.	Condition after Operation.
3. E. N. 41. Female. Jan., 1894.	Fem.	24 hours	Ruptured 20 years. Never quite disappeared. Never wore truss. Severe abdominal pain and frequent vomiting. No flatus passed.	Ice-bag for four hours. A few minutes' taxis before and under anæsthetic.	Small knuckle of very congested gut, buried in omentum, seven ounces of which were removed. Constriction at crural ring. Banks's radical cure.	Bowels open the eighth day. Wound healed on eleventh. Discharged on fourteenth.
4. Middle-age. Male. April, 1894.	Ing.	7 hours	Ruptured 20 years. Always reducible. Never wore truss. During violent exertion, three hours before admission, came down much larger than usual. Great pain in abdomen. Vomited twice after admission. Hernia as large as a child's head. Local signs of strangulation.	Taxis for half-an-hour before I saw him. Ice-bag for four hours. Then taxis for several minutes, and again under anæsthetic.	Hernia was all bowel, which was considerably congested. Stricture at external ring. Ball's radical cure.	Bowels open a few hours after operation, and much red blood passed; and again four days after, when much black blood was passed. Flatulent distension of abdomen for many days after operation, relieved by rectal tube. Remained in hospital a month.
5. Male. 64. June, 1894.	Ing.	3 days	Three days before admission slipped, and rupture came down under the truss, and pain came on in abdomen, with vomiting. Bowels not open or flatus passed since. Latterly vomit said to have been fæcal. Hernia size of child's head. No tension, but no impulse.	Probably taxis tried some time before admission. I tried it for a few minutes under anæsthetic.	Hernia contained much small intestine and a portion of transverse colon, with a great quantity of omentum attached. Adhesions between coils were œdematous and hemorrhagic, and several patches of hemorrhage were seen under the peritoneum on the coils. The peritoneum tore off in a few places on even gentle manipulation where there had been hemorrhage beneath. Constriction at external ring. Half pound of omentum removed.	Passed flatus in twenty-four hours. No symptoms.
6. E. T. 49. Female.	Fem.	48 hours	Ruptured 5 years. Never wore truss. During violent exertion, 48 hours before admission, unusual amount descended, with pain in abdomen, which continued, and she vomited frequently. Hernia felt hard with exception of small area on surface of it, which was soft and fluctuating. No impulse.	Taxis for one hour before admission.	Thin-walled cyst in sac wall first opened. It contained fluid of different colour from fluid in the sac, but resembled sac before opening. Bowel dark, with deep sulcus. Banks's radical cure.	No symptoms. Discharged twenty-first day.

Name, Age, and Date.	Form of Hernia.	Duration of Strangulation.	Symptoms, &c.	Amount of Taxis.	Condition Found on Operation.	Condition after Operation.
7. Male. 76. Oct., 1894.	Ing.	36 hours	Ruptured 50 years. Never wore truss. Unusual amount came down during defecation 36 hours before admission, and then he vomited. Bowels would not act. Was not sick after taking tea and bread and butter, followed by two hours' ride to Hospital, but vomited once after admission. Large swelling occupying left side of scrotum, and extending over external ring. Lower part felt like a hydrocele, except that it lay above the testicle and not around it. The upper, which was separated from the lower by constriction, lay over ring, and felt like a rupture. No impulse in either.	Taxis for fifteen minutes before I saw him, and for a few minutes under ether.	Lower part of the swelling contained several ounces of serous fluid; it was part of the sac into which the strangulated intestine could not descend. The upper swelling contained the strangulated bowel. Constriction at external ring.	No symptoms. Discharged fourteenth day.
8. F. T. 18 months. Male. Oct., 1894.	Ing.	24 hours	Ruptured 6 months. Came down during defecation. Vomiting, and no action of bowels. Abdomen distended. Hernia size of large duck-egg. Local signs of strangulation.	Ice-bag for an hour. A few minutes' taxis before and under anæsthetic. Dresser also tried taxis for a few minutes.	Lower half of sac full of blood-stained serum only. A little blood-clot on bowel, and much in mesenteric attachment. Constriction at external ring. Not congenital sac. Banks's radical cure.	No symptoms. Discharged fourteenth day.
9. Female. 81. Dec., 1894.	Fem.	1 week	Ruptured 40 years. Has come down under truss for several years. Omitted to support during defecation, and pain in abdomen came on directly after, and then vomiting. Vomiting lasted two days, and then ceased for four days, though she drank tea often. Vomited again on seventh day during removal to Hospital, and once after admission. No action of bowels or passage of flatus all the week, though she had aperients and enemata. Much distension of abdomen. Visible coils. Hernia soft, but no impulse. Pulse 120. Seemed very feeble.	Taxis before admission for uncertain period. After admission, a few minutes under anæsthetic.	Bowel only moderately congested. Well marked sulcus. Banks's radical cure. Operation well borne.	During recovery from anæsthetic vomited fæcal material, but not sick after. Flatus passed on third day; but bowels not open though enema given, as distension of abdomen continued, although there was no vomiting. She became more prostrate on night of third day, and died on morning of fourth. P.M.E.—Strangulated coil and neighbouring coil had very thin layer of lymph on them. In mucous membrane on inner aspect of one sulcus was a small ulcer. No sign of suppuration in herniotomy wound. Bowel above strangulated portion much distended.

			very feeble.			much distended.

Name, Age, and Date.	Form of Hernia.	Duration of Strangulation.	Symptoms, &c.	Amount of Taxis.	Condition Found on Operation.	Condition after Operation.
10. H. C. 54. Female. Dec., 1894.	Fem.	24 hours	Ruptured for years. Twenty-four hours before admission came down when lifting heavy weight, and would not go back. Great pain in abdomen and vomiting, and no passage of fæces. Hernia consisted of two parts, one very soft and fluctuating, the other hard. No impulse.	Taxis a few minutes before and again under anæsthetic.	Two sacs: one projecting into the other. The soft fluctuating one contained only fluid; the other only bowel, which was strangulated. There were a few hemorrhages on it. Banks's radical cure.	Bowels open slightly same evening. No symptoms. Discharged in a month.
11. Female. 71. Dec., 1894.	Fem.	3 days	Vomiting came on when laid up in bed with bronchitis. No action of bowels or passage of flatus. Did not notice hernia until second day of symptoms, and only called doctor's attention to it on third day. Never noticed it before. Admitted on third day in a too collapsed condition to give anæsthetic. Operation under cocaine. Abdomen distended. Local signs of strangulated hernia. Vomiting frequent and fæcal.	Taxis tried by doctor at home. Not again after admission.	Blood-stained offensive fluid in sac, looking like blood that had been mixed with strong carbolic lotion. Gut very dark and offensive, with a black patch on it, and two or three patches where the wall looked much thinned. No loss of lustre. One spot in sulcus of constriction looked very thin, as if an ulcer on the inside had nearly perforated. Gut left in sac, after division of ring. Operation only a quarter of an hour.	No further vomiting, but prostration continued, and she died four hours after operation. P.M.E.—Gut lay just as it had been left at operation. Coil above fairly distended. No perforation visible, but water slowly leaked from the bowel without any great pressure. Very shallow ulcer on inner aspect of deep sulcus, but not nearly perforating. The thinned patches were due to stretching apparently: there seemed little more than the peritoneal coat, but no actual perforation. The appearance on the outside resembled the protrusion of Descemet's membrane in a corneal ulcer, only it was the outer coat which protruded, not the mucous membrane of the bowel. There was no peritonitis.
12. A. H. 85. Male. June, 1895.	Fem.	48 hours	Ruptured 10 years. Vomited twice in first 24 hours. Passed flatus during second 24 hours. Abdomen only moderately distended, but some distended coils seen. Irreducible femoral hernia on right side without impulse, and irreducible inguinal on left with impulse. No tension in either. Under taxis, part of the femoral hernia got softer and part harder. Operation on the femoral hernia.	Taxis for uncertain duration before admission. After admission, one and a half hours' ice-bag and then taxis for seven minutes, and then ice-bag again for 4 hours and a few minutes' taxis under anæsthetic.	Strangulated coils, pale colour but very œdematous. Serous fluid in sac. Constriction at saphenous opening. A little hemorrhage at mesenteric attachment. Banks's radical cure.	No shock from operation. On following day bowels open and a large amount of flatus passed. Discharged twenty-fifth day.

interesting question why such marked œdema was associated with pallor rather than congestion. Possibly the great age of the patient, and his feeble circulation, may account for it.

The intermission of the vomiting in case 9 is exceptional. For four days the patient drank "sweet tea" and did not vomit, although she was not under the influence of opium. The same thing occurred, though to a less degree, in cases 7 and 12, in which, after the initial vomiting, the patients were able to keep down solid food. In all these cases the strangulation was marked. In cases of strangulated hernia, patients frequently only vomit if they take solid food or drink; but in these cases they were taking liquids or solids, and yet did not vomit. In case 1 the vomiting was fæcal by the end of the first forty-eight hours of strangulation, though the bowel was only congested and recovery was rapid.

In one case (No. 12) the patient had two irreducible herniæ, and the question arose as to which was strangulated. One was a femoral, the other an inguinal; both had an impulse on coughing, and neither was tense. But on dragging the femoral hernia downwards, away from the lower abdominal wall on which it lay, just above Poupart's ligament, the impulse ceased—it was only transmitted through the abdominal wall,—and this sign was found trustworthy, as the femoral hernia was operated on and found to be strangulated. The impulse in the strangulated hernia as it lay against the abdominal wall was, of course, not distensile.

In three of the cases I noticed the absence of tension in the hernia, which is one of the usual signs of strangulation, and due to the effusion of fluid into the sac or into the bowel. Macready[1] suggests that the rare condition in which the tension in strangulated hernia is absent may be due to such tight gripping of the bowel that both the arterial as well as the venous circulation in its walls would be at once suspended, and no fluid would be poured out either into the bowel or the sac. In case 5 the hernia was an inguinal one of the size of a child's head, and there was very little fluid. It contained small intestine, transverse colon, and a large mass of omentum. Almost

[1] *Op. cit.*, p. 344.

certainly fluid in the sac could have been pressed into the abdomen during taxis, as, although the bowel was tightly nipped where it passed under the upper margin of the ring, the finger could be passed into the abdomen underneath the bowel as already described. In case 12, where there was also no tension, there is evidence that the fluid did pass from the sac into the abdomen during taxis, though a fair amount remained in the hernia. In another, there were only a few drops of chocolate-coloured fluid in the sac. The bowel was plum-coloured, and recovered well. It was a small femoral rupture (case 1). But in case 9 there was a considerable quantity of clear serous fluid. The hernia was a small femoral one and the bowel only moderately congested, and there was hardly any omentum in the sac.

It will be noticed that the two fatal cases were those in which the nature of the case had been overlooked, and the strangulation was advanced. In all the cases where the patients had come early they recovered, and to their early admission their recovery is mainly due. Case 11 points to the advisability of always examining for hernia in cases presenting signs of intestinal obstruction. Had such an examination been made the hernia would have been discovered early, and the woman's life probably saved. To examine for hernia in intestinal obstruction is, of course, an established rule of surgery, but it may be well to refer to it in connection with this illustrative case.

The perfectly satisfactory use of cocaine for anæsthesia in cases where chloroform or ether cannot be given is well shown by the same case. I injected half a grain of cocaine in solution, along a line where the incision was afterwards made, in five places. The patient hardly felt the incision, and certainly nothing more of the operation, though she was quite sensible at the time. I put in three fishing-gut sutures, ready for tying as soon as the skin-incision had been made.

The resemblance of the hernia in case 7 to a combination of hernia and hydrocele was interesting. Over the region of the external ring was a firm dull swelling, the size of a rather flattened orange. This occupied quite the upper half of the left side of the scrotum. The lower part of the swelling felt like a soft

hydrocele, and was separated from the upper part by a slight constriction; but the testicle lay beneath, and was not surrounded by it. The reason why the bowel only occupied the upper part of the sac, allowing the fluid to collect in such large quantities below, was that the strangulated coils were bound together by old adhesions, and could not probably descend as far as they had done at one time. The hour-glass constriction of the sac was not sufficient to prevent the descent of the bowel into the lower half.

In the case of the child (No. 8), the lower half of the sac contained fluid only, the upper held the strangulated bowel; but there was no constriction between the two, as in case 7, suggesting the combination of hydrocele and hernia. A somewhat puzzling condition found in case 6, was the cyst in the sac-wall. I thought when I opened it I was in the sac, and yet it was so small and no bowel could be found. It was not a pouch in the sac, as the fluid it contained was different in character from that in the sac, and no communication could be made out. These cysts are every now and then met with in operations on hernia and their nature is uncertain. Case 3 is an example of the division of the sac into two distinct parts by a band of fascia. The hernia was a femoral one: one part lay over the saphenous opening, the other over Poupart's ligament. Each was the size of an orange, and they moved together. The sac when exposed was found to have a constricting band of the superficial fascia passing across it, dividing it into two compartments. Both were full of omentum; but under the omentum in the lower sac was a knuckle of gut. In case 12 (an inguinal rupture) the sac was also partially divided by a band of fascia; both compartments contained bowel. Case 10 resembles case 5 to a certain extent. The hernia, a femoral one, consisted of two parts: one on the outer side, very soft and fluctuating; one on the inner, hard and tense. I first cut into the soft swelling, and found a sac of serous fluid, but no bowel, only a round mass of what looked like another very thick sac; and on cutting this open, I found the strangulated bowel. This was an example of double sac. The supposed cause of these double sacs is that the original sac becomes obliterated at its neck when the rupture

has been kept up for years by a truss, and then fluid collects in the old sac; then, in the course of time, another sac gets pushed down and invaginated into the old sac, which has become filled with serous fluid; so that on operating on such a case, we first cut into the old sac and find serous fluid only, and then on opening the deeper sac, which projects into it, we discover the bowel. This was exactly the condition in my case; but unfortunately for this theory of causation she had never worn a truss, and the hernia had been constantly descending, so that there had been no chance for a hernial sac to become obliterated at its neck. In a case of Mr. Hulke's—quoted by Macready,[1]—the hernial sac was only discovered after cutting through a series of three cysts which lay over it, each cyst bulging into the one superficial to it.

In several of the cases, it will be noticed, there was blood in the fluid in the sac (case 2), or extravasation on the bowel, and in one case (5) there was a troublesome tendency for the peritoneum to peel off the bowel over the hemorrhagic patches on very gentle manipulation of the bowel in the hernial sac. In one case blood was not found in the sac or on the bowel (case 4), but was passed *per anum* in considerable quantity after operation. In only one case was I the only person who tried taxis, so that I cannot say how much force had been used; but in the case in which I alone tried it, I am perfectly certain no undue force was employed, and it was only continued for two minutes without anæsthesia and three minutes under. The hemorrhages were very trifling ones on the surface of the deeply congested coil. I am inclined to think hemorrhages under the peritoneum may take place, if not from congestion alone, from the very slightest manipulation. All the cases in which there was extravasation of blood on the bowel made very satisfactory recoveries. Mr. W. H. Bennett considers that slight extravasation of blood under the peritoneum is the rule rather than the exception after taxis has been employed.[2] I have seen the omentum infiltrated with blood-clot in a case of strangulated hernia operated on by another surgeon, but never such sanguineous fluid as in case 2. My assistant at the operation, thinking

[1] *Op. cit.*, p. 384. [2] *Lectures on Hernia*, 1893, p. 83.

it was blood from some large vessel, as it streamed out on opening the sac, at once seized a pair of forceps to catch the divided artery.

The remarkable thinning of the gut in patches without actual ulceration, described in the record of case 11, is very remarkable. They might be called extreme local bulgings of the bowel-wall. I cannot find any description of such a condition occurring in strangulated hernia.

The case of stricture following herniotomy (case 2) is of much interest. The conditions which give rise to intestinal obstruction after herniotomy have been well described by Mr. Treves.[1] They are: (1) adhesions of the bowel to the abdominal wall at the ring, or adhesions between the strangulated coils; (2) narrowing from the cicatrix of ulceration in the strangulated bowel. As a rule the symptoms do not come on for weeks after the patient has recovered from the herniotomy, and often not for a considerably longer period. The cause of the formation of the fæcal fistula in this case is not clear. There was no sign of any perforating ulcer in the sulcus of constriction when the bowel was returned, and though very congested, there was no question of gangrene either general or local in the coil. Although the wound suppurated from the first, no fæcal discharge was noticed until the seventeenth day after the operation: but it must be remembered that Banks's radical cure was done after the strangulated bowel had been returned; and the neck of the sac surrounded by the ligature came away with the discharge from the wound at the time the fæcal discharge was first noticed, so that perforation setting up suppuration in the wound may have started soon after the operation, and fæces only have found a way out when the neck of the sac became detached by suppuration later on. If so, there might have been an ulcer in the interior of the bowel (where ulcers always start) at the seat of constriction, which perforated the peritoneal coat after reduction; or a small patch of necrosis and sloughing on the bowel-wall may have formed. In this case there was persistent diarrhœa after the operation. This generally indicates enteritis, unless due to purgatives given before operation, but then it is not continuous.

[1] *Lancet*, 1884, i. 1021.

I did not operate on one of these twelve cases without the most careful and thorough examination of the sulcus in the bowel where it had been nipped by the ring, and for this purpose I invariably drew down the bowel a little way before returning it; for unless this precaution is taken—and it is not taken, I know, by all surgeons—I believe we are always in danger of returning into the abdomen bowel in the sulcus on which an ulcer may be just perforating, or have just perforated, for the perforation may be merely the size of a pin-hole and difficult to detect. Macready refers[1] to the case of a young man who within the last few years was operated on for strangulated hernia at St. Thomas's Hospital, only five hours after the onset of strangulation; but after division of the stricture, reduction was attempted without inspection of the line of constriction, when fæcal matter was seen coming from the neck of the sac; and when the bowel was drawn down, an opening was seen in it involving half its circumference.

It is a very interesting question why these ulcers at the line of constriction begin in the mucous membrane. It seems almost incredible that they should; for it is the peritoneum which bears the stress of the nipping. That they do start within—in the mucous membrane—the *post-mortem* examination of my two fatal cases distinctly demonstrates; and such is the general teaching on the subject. It has been suggested that the peritoneum is the most resisting structure, and the mucous membrane the least, and hence that the former resists the pressure the longest—the latter gives way first; and again, that although the mucous membrane is such a vascular structure, yet for that very reason, if its blood-supply is interfered with, it is more easily destroyed, as it is so dependent for its nutrition on a good supply of blood, and hence it ulcerates first. This reason is probably not the correct one, as it is hardly a question of cutting off the blood-supply to a minute definite area of gut-wall.

The age of the patient in case 8—eighteen months—is worthy of note. The rarity of strangulation in children, and the facility of reduction when it does occur, have long been recognised.

[1] *Op. cit.*, p. 374.

Mr. Marsh, in 1874, recorded[1] the first operation for strangulated hernia at the Great Ormond Street Hospital in twenty-three years.

In conclusion, I would like to say how much I am indebted for assistance in writing this paper to the information collected by Mr. Macready in his recent work on Hernia. I have said nothing about the radical cure of hernia—performed in most of these cases, and in several others which were not strangulated; time and space do not allow.

EXTRA-PERITONEAL SUPPURATION IN PERFORATING APPENDICITIS.

BY

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THE truth of the statement that the vermiform appendix is a totally intra-peritoneal structure appears to have been satisfactorily demonstrated. There are, however, numerous published statistics which appear to show that a portion of the appendix may be uncovered by peritoneum in a natural state of the parts. Fowler writes: "The completeness with which this [the peritoneum] covers the organ varies greatly. . . . The latter [partially covered] condition was found in more than one-quarter of the observations upon the subject which have been recorded, including those of Maurin, who, in the examination of 112 subjects, found the appendix in the entire number completely surrounded."[2] But other observers have had as uniform results as Maurin, and of the same kind. Kelynack in his monograph, based upon more than 200 examinations, says: "In practically all our cases the appendix was a truly intra-peritoneal structure."[3] Treves is equally definite. Hawkins

[1] *St. Barth. Hosp. Rep.*, 1874, x. 206. [2] *A Treatise on Appendicitis*, 1894, p. 22.
[3] *The Pathology of the Vermiform Appendix*, 1893, p. 41.

speaks of an extra-peritoneal appendix as "an anatomical impossibility";[1] pointing out, however, that the appendix may be closely bound down to the peritoneum lining the iliac fossa.

Ferguson[2] speaks of 77 specially interesting cases out of a total of 200 in which he made *post-mortem* examinations. In these "the appendix was so placed and covered by peritoneum that its perforation would open into the sub-peritoneal tissue, and establish a diffuse form of cellulitis." In all these cases the position was retro-cæcal. But Ferguson does not categorically state that in these 77 cases the appendix was only partially covered by peritoneum, though it is obvious that he regarded the appendices in them as being in specially close relationship with the sub-peritoneal tissue. A retro-cæcal position of a completely invested appendix has been repeatedly observed. Ferguson's statements appear, therefore, lacking in precision in this particular, and they do not seriously oppose the view that the normal anatomical arrangement is that of complete peritoneal investiture.

There have been curious and interesting oscillations of opinion as to the situation of appendicitic abscesses. Some of the earlier writers on the subject, notably Sands, held that they were all primarily extra-peritoneal. Later writers seem to doubt the existence of primary extra-peritoneal abscesses resulting from appendical perforation. Published records show, however, that although peritoneal abscesses are much the more frequent, yet occasionally extra-peritoneal abscesses result without peritonitis. These extra-peritoneal collections of pus are described by Fowler as being bounded posteriorly by the iliac fascia, anteriorly by the transversalis fascia, and above by the peritoneum, which is stripped off the boundaries mentioned and pushed upwards. In a case described in this paper, in which a necropsy was made, the abscess was not bounded behind by the iliac fascia; it was beneath that structure. There appear, therefore, to be three situations in which the abscesses may be produced: (1) in the peritoneum, (2) in the subserous tissue, and (3) in the substance of the ilio-psoas muscle; and an abscess

[1] *On Diseases of the Vermiform Appendix*, 1895, p. 19.

[2] *Am. J. M. Sc.*, 1891, ci. 61.

beginning in any one of these positions may penetrate secondarily into the others.

Talamon quotes statistics which illustrate the relative frequency of the intra- and extra-peritoneal forms of suppuration. He mentions Weir as having in 100 *post-mortem* examinations found 85 cases of peritonitis, 4 of extra-peritoneal suppuration, and 9 of mixed intra- and extra-peritoneal inflammation. Similarly Maurin found in 94 fatal cases 80 of peritonitis, 5 of extra-peritoneal suppuration, and 9 mixed examples. Talamon asks if it is not fair to assume that in some of the cured cases of appendicitis the inflammation has been localised in the cellular tissue? The percentage of cases of extra-peritoneal suppuration in the above lists is 14.9, and of extra-peritoneal suppuration without peritonitis 4.6.

Ferguson asserts that if perforation had occurred in his 77 retro-cæcal appendices, extra-peritoneal suppuration would have resulted. That would have yielded a percentage of 38.5 in 200 cases. The discrepancy in the two computations shows the incorrectness of Ferguson's assumption, and extra-peritoneal suppuration in all probability would not have occurred half as often as he maintains. Many intra-peritoneal abscesses simulating renal and hepatic abscesses have been described and shown to have resulted from perforation of retro-cæcal appendices. The correct explanation of the origin of a primarily extra-peritoneal abscess in appendicitis is no doubt that of Hawkins. He says: "When the appendix is adherent to the iliacus-peritoneum, a perforation of it on the adherent side may lead directly to inoculation of the retro-peritoneal tissue, so that a large abscess may form in the iliac fossa with little or no affection of the peritoneum." [1] The adhesion of the appendix to the iliac peritoneum may be natural or the result of previous pathological processes. The secondarily extra-peritoneal abscesses arise when the peritoneal abscesses cause sloughing and perforation of the parietal peritoneum in contact with them. As Fitz states, within three weeks of this event the iliac muscle may be destroyed and the ilium laid bare. The relative infrequency of occurrence of these extra-peritoneal

[1] *Op. cit.*, p. 92.

abscesses makes the following two cases of special interest. The sequence of events and the pathology of the second case must of course remain doubtful, as the patient recovered; but the case seems to be remarkably similar to the first one, of which the pathology is clearer. The only analogous cases, an account of which I have had an opportunity of seeing, are two mentioned by Kelynack.[1]

CASE 1.—On June 21st, 1895, a labouring man, T. W., aged 72, was admitted to the Bristol General Hospital complaining of a swelling in the right groin. Five weeks before, when returning home from work, he had been seized with pain in the right thigh, and had since then kept his bed. The swelling of which he complained had gradually formed in that time. For a week he had had severe cough. There was no history of rigors, vomiting, or abdominal pain. It was impossible to obtain a more complete account of our patient's illness than the above, he himself being too ill and old to give it, and his wife too intoxicated and indifferent.

The man was in an extremely feeble state on admission. He was sallow, with sunken eyes, and dry, brown, and cracked tongue. Pulse 92, small and weak. Respirations 32. There were large bubbling râles and rhonchi heard all over the chest. There was a huge fluctuating swelling in the upper third of the thigh, the inner border being at the line of the femoral artery. This swelling extended upwards beneath Poupart's ligament into the iliac fossa, and outwards in that region to midway between the crest of the ilium and the last rib. The abdomen being moderately flaccid, the swelling could be further traced upwards near the middle line to the level of an inch above the umbilicus. This uppermost portion of the swelling was deeply situated; but the lower part near Poupart's ligament was superficial, and where superficial in the iliac fossa and in the thigh yielded high-pitched resonance when percussed and audible bubbling when pressed upon.

On the day after admission, Mr. Pickering opened the abscess with two incisions—one near the middle line of the thigh just below Poupart's ligament, the other on the outer border of the thigh. The contents were brownish fæcal-smelling pus and gas. The cavity was felt to extend inwards under the external iliac artery to the brim of the pelvis; upwards its limits could not be reached. It was freely douched with carbolic lotion (1 in 40); and as hemorrhage was free, sponges, thoroughly dusted with iodoform, were packed into the iliac portion. The operation did not improve the patient's condition, and he gradually sank, dying at midnight on the 23rd.

Necropsy.—There was no peritonitis present. There was an adhesion of an omental cord to the brim of the pelvis near the symphysis pubis. The cæcum was natural. The vermiform appendix was not obvious at first sight. On careful inspection, and after lifting up the cæcum, it was found passing downwards. It was firmly fixed to the front wall of the abscess. The direction changed to an outward one two inches from the cæcum. This outer portion was half an inch long. On laying open its canal, it was found to end in the abscess cavity. The opening into the abscess was on the adherent posterior surface of the appendix at its termination, was roughly circular, with a diameter of about a

[1] *Op. cit.*, pp. 114-5.

fifth of an inch, and the mucous membrane around the aperture was obviously ulcerated. The abscess had largely destroyed the substance of the iliacus muscle, and a narrow portion extended upwards in the psoas sheath to the level of the hilum of the kidney. The front wall of the abscess in the iliac region was extremely thin, and no differentiation between iliac fascia and peritoneum could be made, these two layers appearing to be intimately blended.

CASE 2.—On November 8th, 1894, a signalman, W. M., aged 26, was admitted to the Bristol General Hospital complaining of pain and swelling in the right groin, and with the following history: Ten weeks before admission to the hospital he began to suffer with slight abdominal pain (hypogastric). A day or two later, when bathing at Weymouth, he felt pain in the right iliac region in striking out with the corresponding leg. On the next day the pain was still considerable, and he did not feel as well as usual in himself and his appetite was bad. He returned to work, however, after the few days' holiday he had had, and continued working for two days. On the third day, when at work signalling with his right leg forward, he was again seized with severe pain in the same region (iliac). He walked home, and then had vomiting and diarrhœa. The symptoms persisting at the end of a week, he took to bed and remained there for four weeks. The diarrhœa subsided under treatment in a few days; but his temperature from the time he took to bed for three weeks was constantly between 101° and 103°. The temperature then became normal; and at the end of six weeks he returned to work, having no pain, no abdominal swelling, and no lameness. After two days' work pain returned. It was now in the groin, and led patient to walk with a limp. He again took to bed, and his temperature rose to 102°. The thigh became flexed at the hip, and both the leg and thigh were œdematous, and a swelling gradually formed in the groin. The bowels were regular. There was no abdominal pain, no vomiting, and no shivering. At the end of four weeks he was admitted to the hospital.

He was then pale and sallow in appearance. Temperature 101° in the evening. The right thigh was flexed, forming an angle of 45° with the plane of the bed. Rotation, abduction, and adduction at the hip were well within a limited range; flexion quite free, extension being most of all limited. No pain was elicited when the femur was jarred or moved to a moderate degree. Palpation revealed dense induration extending transversely immediately above Poupart's ligament and outwards from the middle point of that ligament to the middle of the crest of the ilium, past the anterior space, and rising upwards about one and a half inches. This swelling was continuous, with a less marked swelling in the outer part of Scarpa's triangle.

Ten days after admission, palpable gurgling was detected in the swelling, and fluctuation. On the twelfth day Mr. Pickering made two incisions into the swelling, one above and one below Poupart's ligament. Extremely fœtid pus escaped, and a small quantity of gas. On the second day after the operation the temperature dropped to normal, and remained normal until the patient's discharge, when the wounds had healed. When last seen, on July 5th, 1895, the patient was well in all respects, and had been at work for five months.

It will be seen that both the cases were under the care of Mr. C. F. Pickering, and I have to thank him for kindly allowing me to publish them.

NOTES ON A CASE OF EXOPHTHALMIC GOITRE.

BY

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JANE B., aged 34, was admitted to the Royal Infirmary on June 17th, 1895, suffering from well-marked exophthalmic goitre.

The family history was good, and the patient had been quite healthy until about five years previously, when she nursed her husband through a long and fatal illness, and subsequently had great difficulty in finding work to support two children and herself.

About three months after her husband's death she first noticed the symptoms of the disease. She managed, though with difficulty, to earn her living during the first four years, but in the course of the last six months found herself gradually incapacitated by reason of increasing weakness and palpitation.

On admission it was found that the ordinary symptoms of Graves's disease were present. These need be but briefly mentioned: there was considerable exophthalmos with Von Graefe's and Stellwag's signs; all three lobes of the thyroid gland were enlarged, forming a firm but elastic tumour. A systolic thrill could be felt and heard over the superior and inferior thyroid arteries. The heart was slightly hypertrophied, and the cardiac and pulse-rate varied from 120 to 130 per minute. The vascular excitability was extreme: a slight emotion would make the patient flush over head, neck, and chest, and send the pulse up to 150 per minute. There was slight muscular tremor. The patient was a good deal emaciated. The temperature varied between 100° and 101° F.

The patient was kept in bed and belladonna administered in increasing doses. Under this treatment the pulse-frequency gradually declined, and at the end of a month was, on an average, 100 per minute; the temperature became normal, and the patient

thought herself better. It was found, however, that even a few hours out of bed sent the temperature up to 100° and the pulse-rate to 120. In short, no permanent improvement was effected, and the patient was, at the end of six weeks, as unable to follow her employment as before.

I therefore asked Mr. Harsant to consider the question of partial excision of the thyroid. He advised operation, and at the end of July removed the right lateral lobe of the gland. The result, unfortunately, was disastrous—though the operation lasted a very short time and the bleeding was slight, yet in a little over thirty hours the patient died. The temperature gradually rose to 103°, the pulse-rate increased to 130 per minute, there was some delirium, and death took place from heart-failure.

The only macroscopic *post-mortem* changes found were the enlargement of the left lateral and median lobes of the thyroid gland, and hypertrophy and dilatation of the heart. The wound looked quite healthy. Microscopic examination of sections of the thyroid show the changes described by Greenfield. There is no increased vascularity of the gland, though the superficial veins were enlarged. The epithelial cells lining the vesicles are changed from a cubical to a columnar form, and there are papillary projections of the epithelial cells into the vesicles. The series of changes can be easily traced; some vesicles are lined by cubical cells only, in others the cells in part of the circumference have become columnar, and in other vesicles again these columnar cells have proliferated to form the papillary projections. The alterations of structure evidently begin locally in the circuit of cells lining a vesicle, and do not affect the whole circumference at once. The production of duct-like spaces lined by cubical cells and the development of connective tissue, described by Greenfield, are not obvious.

These anatomical changes certainly suggest a heightened activity of the gland. Further than this they do not take us—to ascertain its nature we must turn to other evidence. If thyroid gland be administered to a person suffering from myxœdema, the symptoms gradually disappear. If to such

Low power.

High power.

a patient or to a healthy person overdoses of the gland be given, many of the symptoms of Graves's disease, *e.g.* tachycardia, heightened temperature, wasting, occur. But one characteristic symptom, the exophthalmos, is not so produced.

It may be inferred that in Graves's disease the disordered metabolism results in the production of two different substances —(1) an excess of normal thyroid secretion, and (2) a substance which causes the exophthalmos and other eye symptoms. The effects of cocaine on the eye have been brought forward by Edmunds in support of the theory that a substance of somewhat similar properties may possibly be produced by the thyroid. We may also suppose that there is no necessary quantitative relation between the secretion of these two substances; for, as is well known, there may be tachycardia without, or with but little, exophthalmos, and conversely.

Further, whilst the degree of exophthalmos is, so to speak, an isolated phenomenon, the amount of cardiac disturbance is, apart from the question of subsequent heart-failure, in more or less close relation to the general bodily disturbance.

Again, in some cases the disturbance of thyroid metabolism may be supposed to be such that whilst there is a diminution or arrest of the normal secretion, that of the exophthalmos producing substance still goes on. This would result in a combination of myxœdema and exophthalmos. Such conditions have actually been observed, especially as sequels of Graves's disease.

Other combinations of the symptoms of Graves's disease and exophthalmos are, according to this theory, not possible, and, as far as I have been able to read, have not been recorded. Thus we do not find myxœdema and tachycardia. If we suppose, then, that the "perverted function" of the thyroid, spoken of by some authors, is of this dual nature—a secretion of an exophthalmos producing substance, and an excess of normal secretion—it is possible to explain the non-parallelism of the various phenomena of Graves's disease, the likenesses and differences between the symptoms of Graves's disease and those caused by excessive thyroid feeding, and the occasional combination of myxœdema with exophthalmos.

The course taken by the "internal" secretion of the thyroid gland—the failure of which is the proximate cause of myxœdema —merits discussion. It may be inferred from analogy that this secretion does not first pass into the thyroid vesicles, but that it passes directly from the external surface of the lining cells into the lymphatics and thence into the blood. For in the case of the pancreas it is pretty well established that whilst the digestive juices enter the duct, the "internal" pancreatic secretion—failure of which is the cause of some cases of glycosuria—passes at once into surrounding lymphatics and so into the blood. And the thyroid was originally a gland pouring a secretion into the anterior end of the alimentary canal.

The ancestral glandular, colloid-producing, function of the thyroid has a tendency to disappear. Thus a part of the gland consists of epithelial cells not arranged into vesicles, but merely aggregated together and producing no "external" secretion. And in some animals, *e.g.* the rabbit, where these cells are separated off as an accessory thyroid, it has been shown by Gley and by Edmunds that myxœdema does not occur unless the accessory as well as the main thyroid glands are excised. In such accessory thyroids the, probably secondary, function of producing an "internal" secretion alone persists.

From an anatomical point of view, then, the terms "internal" and "external" are misapplied: whilst an "external" secretion is one which is poured into a duct or upon a free surface, an "internal" one passes into the blood and influences tissue metabolism: it is from a physiological point of view that the use of the terms is justified.

The influence of the "internal" thyroid secretion on nitrogenous and non-nitrogenous metabolism may here be touched upon. It has been shown by Ord and White that if thyroid gland be administered to a person suffering from myxœdema, the body weight diminishes, and there is a large increase in the nitrogenous excreta almost entirely in the form of urea, whilst correspondingly the quantity of urine is increased. Evidently there is an increase in the rate of nitrogenous metabolism. Such increase is, in large part at any rate, the cause of the wasting which occurs in Graves's disease.

It may here be remarked, though it is a side issue, that thyroid gland may hence be given as a diuretic. Thus, to a non-myxœdematous woman, aged 41, suffering from ascites due to chronic peritonitis, where the average amount of urine was 20 oz. during a period of 14 days, the administration of 15 grs. of dried thyroid gland daily caused during the next 14 days an average secretion of 36 oz. urine. Since, however, this diuresis is due mainly, if not entirely, to the increase in the urea, it is at the expense of the tissues that such an action takes place. It is better to give urea by the mouth.

Very occasionally glycosuria occurs as a complication of Graves's disease, and it is of some interest to enquire whether there is any causal connection between the two phenomena, whether the "internal" secretion of the thyroid has any marked action on non-nitrogenous, as well as on nitrogenous, metabolism. The diminution of subcutaneous fat in a person suffering from Graves's disease, and the effects of administration of thyroid in cases of obesity, suggest that it has.

To further test the question, thyroid gland was given to a boy, aged 15, suffering from diabetes; the result was an increase in the amount of sugar excreted when large quantities of thyroid were administered, as shown in the following table:

	Average daily quantity of urine. oz.	Average daily quantity of sugar. grs.
1st period of 8 days, diabetic diet, no opium, no thyroid	76	1600
2nd „ 14 „ „ „ opium 1 gr., „	57	1110
3rd „ 15 „ „ „ „ „ 5 grs. dried thyroid	55	930
4th „ 6 „ „ „ „ „ 10 „ „	81	2250
5th „ 6 „ „ „ „ „ no thyroid	68	920

Thus, it would seem that whilst in ordinary cases of Graves's disease and in cases where thyroid is administered the increase in non-nitrogenous metabolism does not result in the production of sugar, yet its occasional occurrence is not altogether obscure.

The results above noted show the need of the greatest caution in giving thyroid gland as any part of the treatment of obesity, in which slight glycosuria is not so rarely present.

Some light has recently been thrown on the obscure connection between the "perverted function" of the thyroid in

Graves's disease and the well-known etiology of the complaint. As Gowers says, "No immediate cause is so frequent as depressing emotion—sudden terror or prolonged distress." For it has been shown by Berkeley that the thyroid gland has a liberal supply of nerve fibres, which, entering alongside of the blood-vessels, form anastomoses round the vesicles and send off numerous fine branches which end in small knobs in direct contact with the outside of, or between, the epithelial cells. There is thus a direct connection between the secreting cells and the central nervous system. And just as the central nervous system controls and regulates the production of "external" glandular secretions, *e.g.* the saliva, so is it probable that it also controls and regulates the production of "internal" glandular secretions.

In conclusion, a practical point may be briefly discussed. Are those of us who accept the thyroid view of Graves's disease justified in recommending operation as a mode of treatment? In slighter cases, rest in bed and the administration of belladonna—the drug which of all others does most good, perhaps by inhibiting secretion—suffice to bring about a cure. In more severe cases, excision of part of the gland will, if the patient survive the first few days, produce a very great improvement or recovery. But it is precisely in these cases that there is considerable risk to life—a risk which it is not in the surgeon's power to diminish—and such a result as that recorded above must make one hesitate a little in proposing operation, even when the disease is well marked.

I have much pleasure in thanking Mr. James Taylor for the photo-micrographs.

Progress of the Medical Sciences.

MEDICINE.

Physiologists have for some time differed as to whether **the function of the supra-renal capsules** is to render effete products of metabolism harmless, or to secrete some substance that is of value in the internal economy. The substance extracted

from these bodies by Schäfer and Oliver, physiologically tested, caused great rise of arterial tension, and when the restraining action of the organ was abolished led to increase in force and rapidity of the heart-beat.

Since in **Addison's disease** low arterial tension and feeble cardiac action are such noteworthy features, it seemed reasonable to conclude that the destruction of the supra-renal capsules that is known to be present deprives the circulatory system of a necessary stimulant. Acting on this hypothesis, Dr. Oliver tried extract of supra-renal tissue in Addison's disease, and recorded two cases in which improvement took place. Other cases brought forward more recently seem to throw some doubt upon the efficacy of the remedy. Dr. Murrell [1] reports the case of a man aged 31, suffering from Addison's disease, in whom the symptoms appeared to be aggravated rather than lessened in severity by tabloids of supra-renal extract. Supra-renal glands, first of sheep then of calves, were substituted for the tabloids with no better result, and the patient steadily grew worse and died. At the Clinical Society of London, Drs. Ringer and Phear[2] read notes of a case in which supra-renal extract also failed; and Dr. Ringer pointed out that should improvement occur in the course of the treatment, it does not follow that the extract has acted beneficially, since the course of Addison's disease may be variable and some temporary amelioriation take place. While these two cases are not encouraging, it must be mentioned that Dr. Sansom[3] records a case in which some improvement occurred under treatment with supra-renal extract, and a similar case is recorded by Dr. Lloyd Jones[4]. Stockton also[5] treated a case with benefit with the supra-renal glands of the sheep. The patient, a woman aged 40, gained weight, lost the pigmentation of the skin and her dyspeptic symptoms, while her pulse increased in force.

It would be disappointing were the treatment of Addison's disease by supra-renal extract to prove to be of no value, since the experiments of Oliver and Schäfer seemed to show that there was scientific ground for anticipating some beneficial result.

* * * *

One is not surprised, however, when one hears of **bone-marrow** failing **in pernicious anæmia,** since it is not obvious how the marrow is expected to act. Bertram Hunt [6] gives notes of three cases of pernicious anæmia unsuccessfully treated with bone-marrow. During the time it was tried there was no increase of corpuscles or of hæmoglobin in the blood of any of the patients. Although bone-marrow failed, one of these cases is interesting as an illustration of the marked improvement that sometimes follows the use of arsenic. The patient was given

[1] *Lancet*, 1896, i. 289. [2] *Brit. M. J.*, 1896, i. 150.
[3] *Clin. Sketches*, 1895, ii. 132. [4] *Brit. M. J.*, 1895, ii. 483.
[5] *Med. News*, 1895, lxvii. 551. [6] *Lancet*, 1896, i. 282.

Fowler's solution, first in quantities of nine minims a day, rapidly rising to seventy minims. The hæmoglobin rose from 26 per cent. to 48 per cent. in three weeks. The large doses of arsenic caused the development of some peripheral neuritis, and the drug was discontinued. The improvement, however, was maintained, and the hæmoglobin reached 75 per cent. of the normal at the end of another fortnight, when the neuritis had apparently disappeared.

* * * *

In connection with the treatment of disease by organic extracts, it may be mentioned that a few cases of recovery from **tetanus** continue to be reported under **antitoxin injections.** Delbecq[1] records the case of a boy, aged 13, who, when bathing in a ditch, cut his knee on some broken glass. Tetanus developed seventeen days after. Injections of tetanus antitoxin were commenced on the second day of the disease. Three injections of 10 c.cm. were given—two on successive days, the third at two days' interval after the second. Six days after the commencement of the treatment the spasms had disappeared, but some rigidity remained. This, however, gradually grew less, and the boy returned to perfect health. Other cases of recovery from tetanus in children under antitoxin injections are recorded by Tracey[2] and by Grayson:[3] one in a girl aged 7 years, the other in a boy aged 6½. Both, like that just referred to, were chronic cases. In the girl the disease commenced fourteen days after two slight burns; in the boy, seven days after treading on a nail. Injections of tetanus antitoxic serum were not commenced until seven days after the onset of the disease in the one case, twelve days in the other. Tracey gave twelve injections on an average once a day, Grayson gave five only. Recovery was somewhat slow, but complete in both instances. Withington[4] also records a case of tetanus occurring in a woman, aged 30, after abortion, who recovered after having been subjected to treatment by injections of tetanus antitoxin. The spasms commenced 13 days after the abortion, and the injections were commenced 13 days after the onset of the disease. She was given four doses of 22 c.cm. of the antitoxic serum. Withington discusses the question whether the recovery was spontaneous, or due to the treatment. He quotes figures from Richter and Behring showing the percentage of fatality in cases of tetanus occurring at various periods after injury. Where the incubation-period was under ten days, recoveries in ninety-one cases were only 4 per cent. When the incubation-period extended to between eleven and fifteen days, the number of recoveries was greater. In fifty-four cases it was 27 per cent. When tetanus developed from fifteen to twenty days after injury, in twenty cases the percentage of recoveries was as high as 45 per cent.

[1] *Nord méd.*, 1896, iii. 3. [2] *Lancet*, 1896, i. 287.
[3] *Pittsburgh M. Rev.*, 1895, ix. 303. Abstract in *Pediatrics*, 1896, i. 92.
[4] *Boston M. & S. J.*, 1896, cxxxiv. 53.

Withington mentions that in this case the incubation-period was thirteen days, and since the probability of recovery was one in four, he felt unable to say that the cure was due to the treatment. The same reasoning may be applied to the cases of Tracey and Delbecq, in which the incubation-periods were fourteen days and seventeen days respectively. The only case that comes under the category of those in which the mortality is so high that recovery may be considered to be almost hopeless is that of Grayson, where the tetanus commenced eight days after the injury. It must be remarked, however, that the symptoms were not severe. It is obvious that before we are able to judge the value of tetanus antitoxin, it will be necessary to know how many cases are treated unsuccessfully with this remedy. Since recovery may occur in chronic tetanus under various systems of treatment, the occasional record of probable cure by serum injections will not materially advance the subject.

* * * *

Hektoen [1] records a case of **interstitial myocarditis due to syphilis** in a child six weeks old, and mentions that only eleven other cases have been recorded. In two of these eleven cases sudden death occurred when the children were considered to be in good health—a noteworthy fact, since it shows that this disease in the child may lead to the same abrupt arrest of heart-action that frequently occurs in the adult when the heart is affected with syphilis. Jacquinet [2] treats the subject of **syphilis of the heart** very fully. In connection with the above remark it may be mentioned that he quotes Mracek as saying that of fifty-eight cases of syphilis of the heart, twenty-one ended in sudden death. Others terminated in what French writers call acute asystole, where severe dyspnœa ushers in the rapidly-approaching end. Jacquinet quotes as an example the case of a prostitute who was dining in a beerhouse with some of her companions, when she complained of pain in the stomach and abdomen. The pains increased, and palpitation of the heart was added. She was removed to a hospital, and died of "advanced asphyxia" after a few hours. The pain mentioned in this case suggests angina pectoris, which may sometimes be epigastric in situation. Jacquinet comments upon this point, and refers to the possibility of cardiac pain being a symptom of syphilis of the heart. He mentions that one of the recorded cases of sudden death occurred in a sailor, who died putting his hand to his heart as if he suffered pain in that region. Huchard is quoted as saying that of 110 cases of angina pectoris, in thirty-two a history of syphilis was obtained, and other observers are mentioned as having noticed severe cardiac pain in syphilitic subjects. This point is of some interest, since potassium iodide is recognised as of value in angina pectoris. The drug is not generally given,

[1] *J. Path. & Bacteriol.*, 1896, iii. 472. [2] *Gaz. d. hôp.*, 1895, lxviii. 917.

however, with the idea of combating syphilis, but of influencing the diseased condition of the coronary arteries that often exists. Yet a satisfactory result naturally suggests that this disease of the coronary arteries may be sometimes syphilitic, like aortitis of the intra-pericardial portion of the aorta, with which cardiac pain is also often associated. Loomis [1] also writes upon the subject of syphilitic lesions of the heart. Fifteen cases of fibroid disease of the heart have come under his observation, three of which were considered beyond all doubt to have been of syphilitic origin. He also has seen four cases of gummata of the heart-wall. Sudden death occurred in two of these cases. Notes are given of one. An apparently healthy man, aged 35, was found lying dead on his bedroom floor, with his hat in his hand, having obviously fallen immediately after entry. The two cases that did not terminate suddenly were in young prostitutes. One of these died with intense dyspnœa and cyanosis; the other was admitted to the Bellevue Hospital for lobar pneumonia, which ended fatally. Dr. Loomis emphasises the point that the question of syphilis as a probable cause of heart-disease should not be overlooked. He says: "When symptoms of cardiac failure occur during the prime of life for which no cause can be ascertained, such as rheumatic history, valvular disease, arterial changes, or kidney complications, especially in one with a syphilitic history, these should always suggest syphilis as the cause of the condition." Before leaving this subject, we may add that Dr. Shingleton Smith [2] has recently recorded a case of enlarged heart, with an extensive fibroid patch in the left ventricle, apparently produced by a gumma, since there was a gumma on the liver and extensive scarring the result of the presence of others. This case, which occurred in a woman aged 38, who apparently had led the life of a prostitute, is interesting, because she had suffered from symptoms pointing to the heart for nearly two years, and had been admitted to the Bristol Royal Infirmary on four separate occasions for cardiac disease during that time. As we have seen, sudden death is common when syphilis attacks the heart; but the more gradual cardiac failure present in such a case as this shows that the disease may sometimes give warning of its presence in sufficient time to render it possible that it may be combated successfully, if we do not habitually ignore its power to injure this important organ.

* * * *

Dr. Handfield-Jones [3] has delivered the Harveian lectures, taking for his subject **the heart in relation to pregnancy, parturition, and the puerperal state.** It is not possible here to follow carefully all the various points brought out, but one or two of interest may be referred to. The dangers of a defective circulation may be ranged under two heads—dangers primarily to the fœtus and to the mother. In the first place, any derange-

[1] *Am. J. M. Sc.*, 1895, cx. 389. [2] *Clin. J.*, 1896, vii. 145.
[3] *Lancet*, 1896, i. 145, 213, 275.

ment of the circulation that affects the nutrition of the tissues of the mother affects the placenta, and abortion may take place; on the other hand, the increased work entailed on nourishing the fœtus puts additional strain upon the heart of the mother, which, if weak, may show signs of failure. In the healthy pregnant woman the heart meets the extra requirements by some degree of hypertrophy, which, however, largely disappears as soon as the pregnancy is over and the need for it is removed. If this hypertrophy fails to take place, the heart, which may be sufficiently strong under ordinary circumstances, gives way and cardiac distress makes its appearance. Where heart-weakness has led to repeated abortions, Dr. Handfield-Jones thinks that ordinary care in husbanding the energies of the mother may prevent this accident, and he gives notes of cases illustrating the success that may attend this care. As already mentioned, the danger may, however, be not to the fœtus but to the mother. In rare instances sudden death occurs during parturition, and in others slower cardiac failure occurs a few days after the labour is over. Notes of several cases that have come under his observation are given. In only two is there mention of the result of a *post-mortem* examination; but in both of these valvular disease was absent. Before appreciating the conclusions at which Dr. Handfield-Jones arrives, on reading the brief record of the cases given where symptoms of heart-weakness complicated pregnancy, one may perhaps be struck with the uncertainty of the existence of valvular disease in many of them. Dr. Handfield-Jones lays stress upon this point. His paper seems to be partly intended to show that the hypertrophy of the heart which normally occurs during pregnancy may occasionally be defective. A nutrition that ought to be physiological may be so altered as to be pathological, and cardiac failure of various degrees occurs even when the valves are perfectly healthy. Of the various forms of valvular disease, mitral stenosis is considered the most serious; but Dr. Handfield-Jones does not think that it necessarily adds to the risks of child-bearing. One woman with an obviously diseased heart may have several children without serious consequences; another, whose heart appears healthy before the commencement of pregnancy, may die of cardiac failure after labour.

Other papers have recently appeared upon heart-disease in pregnancy. Allyn[1] of Philadelphia gives a *resumé* of published literature upon this subject, and adopts the view that mitral stenosis is a serious lesion, but thinks that if well compensated, and there is no subjective evidence of its presence, marriage may be permitted. Rosenberg,[2] on the other hand, who records two cases of death in primiparæ affected with heart-disease, states that the presence of such disease makes it imperative that marriage should be forbidden.

THEODORE FISHER.

[1] *Univ. M. Mag.*, 1896, viii. 172. [2] *N. York M. J.*, 1896, lxiii. 77.

SURGERY.

The **surgical treatment of Tic douloureux** in its severer and more inveterate forms has made extraordinary strides in the last few years, and the order of procedure in such treatment is liable to start up as a serious practical problem at any moment. The present seems, therefore, a fitting time to review our position.

The true pathology of the disease should naturally precede such an inquiry. Unfortunately this is by no means established. Dr. Gowers seems to "regard idiopathic neuralgia as the result of the over-action, the 'discharge,' of the nerve-cells constituting the proximate centre of the nerve;"[1] but admits that many of the phenomena suggest that a neuralgia which is at first purely central may, by the secondary vascular disturbance it induces, involve the nerve-sheaths. A large number of observers, however, have found well-marked histological changes in affected nerves, generally speaking of a chronic inflammatory type. Thus Horsley, Putnam, and Schweinitz[2] report swelling, shrinking, or disappearance of the axis-cylinders, a swollen condition of the medullary substance, proliferation of nuclei in the sheath of Schwann, and an increase of the endoneurium (sometimes also of the perineurium) in portions of excised nerves; and Mr. Rose in one of his cases[3] found an increase of the interstitial fibrous tissue between the ganglion-cells of the Gasserian ganglion he had removed. Keen[4] reports in the same sense. Dana—quoted by Rose[5]—thinks the majority of cases are due to "an obliterative endarteritis of the vessels supplying the nerve." Mr. Victor Horsley, writing of the surgical treatment of trigeminal neuralgia,[6] says: "I hold very strongly the opinion that epileptiform neuralgia is a purely peripheral malady, affecting principally the small subcutaneous branches of the nerve, or possibly the nerve endings, as well as the trunks of the fifth nerve, as they run in the bony canals of the facial bones, and that complete removal of the pain in any given division of the nerve may be obtained by ablation of the nerve from the base of the skull, unless the stump of the nerve become the seat of neuritis."

The various surgical measures that have been suggested and adopted are, in their historical order: (1) division of the nerve—neurotomy; (2) excision of a portion of the nerve trunk—neurectomy; (3) stretching the nerve; (4) ligature of the common carotid; (5) avulsion of the nerve—that is to say, tearing it off as close to its proximal end as possible, and cutting it off distally. **Neurotomy** and **nerve-stretching** need scarcely be discussed; for **excision** or **avulsion** of an affected nerve manifestly offers greater

[1] *Diseases of the Nervous System*, 2nd ed., vol. ii., 1893, p. 803.
[2] Quoted by Rose, *Brit. M. J.*, 1892, i. 53. [3] *Lancet*, 1890, ii. 914.
[4] *Am. J. M. Sc.*, 1896, cxi. 59.
[5] *Brit. M. J.*, 1892, i. 53. [6] *Brit. M. J.*, 1891, ii. 1251.

chances of a permanent result, and without any increased risk. **Ligature of the carotid** seems to be dismissed as an anachronism; although Mr. Rose[1] quotes some remarkable instances of its apparent success, and points out its interest on Dana's hypothesis of endarteritis. The risks, however, which attend this operation—especially of cerebral complications—are sufficient (in the uncertainty of its action) to negative its adoption, except perhaps as a last resort in special cases.

To these operative resources another has been added within the last few years; viz., more or less complete **removal of the Gasserian ganglion.** This bold measure has been conceived, and carried out in different ways, by several surgeons, and their suggestions and methods seem to be in a fair way of getting an influential and increasing following, and must therefore be reckoned with.

The real enquiry is narrowed to that of **the relative values**, or the proper spheres of action, **of neurectomy** (with which may be coupled avulsion) **and operations on the Gasserian ganglion.** Unfortunately a large number of cases in which neurectomy has been performed have relapsed after a longer or shorter interval, the pain either returning in the same branch or appearing in some other one. The first kind of relapse has been generally attributed to reunion of the nerve, from the removal of too small a piece; and no doubt in many cases this has been the cause. The regenerative power of nerves seems to be very considerable; and experiments of Hüter are quoted by Horsley[2] as showing that "not less than five inches must be removed" to prevent reunion with certainty, although he thinks this estimate excessive. On the other hand, he insists on factors of even greater importance in the causation of either kind of recurrence. The three branches of the trigeminal nerve lie for a considerable part of their course in small bony canals, and if the neuritis does not actually start in them, it is often very intense there; and, to ensure success, the section of the nerve should be made well to the proximal side of its entrance into such a canal. Further, in cases of long-standing neuralgia, the only chance of success by neurectomy would appear to be in getting as close as possible to the origin of the nerve, where it may still be healthy. This is the essential feature of the method of avulsion introduced by Thiersch, as long a piece of the nerve being torn away proximally as possible. In this way considerable lengths of nerve have been removed, and some remarkable success has been attained. Out of twenty-eight recorded operations, there had been only one relapse, and this in a very hysterical woman; and several of these had been performed six years previously.[3] Another cause of relapse, Mr. Horsley is convinced, is to be found in the occurrence of neuritis in the stump, generally due to failure of antiseptic precautions. In his paper, already alluded to, he gives a table of neurectomies performed by him on branches of

[1] *Loc. cit.* [2] *Loc. cit.* [3] Quoted by Rose, *loc. cit.*

the fifth nerve. Of ten cases, in which the last operation dates back three or more years, seven had remained quite free from pain for periods of from three to five years, one having been operated upon four times, the others only once. One of the three remaining cases was completely relieved when last heard of; the second (whose brother and sister were "melancholic") developed dementia after her third operation; and the last died of shock after avulsion of the fifth nerve-root from the bulb. Nine other cases are included in the table of more recent date. One remained quite free from pain 2 years 10 months, and three 2 years 6 months, after one operation; and *all* had been relieved up to the date of the publication—one, however, having undergone three operations. These results certainly represent a measure of success far greater than the conclusions of others would have led us to expect, and would seem to justify Mr. Horsley's conclusion, that operative procedure in these cases "is an imperative duty when all medical measures of relief have failed"; and that, if the principles laid down are followed, recurrence will occur far less often than it has hitherto.[1]

Mr. Rose,[2] on the other hand, after his elaborate review of the subject, gave it as his opinion "that in severe cases of epileptiform neuralgia both medical and surgical treatment had hitherto been unavailing to give permanent relief." For such inveterate cases of neuralgia, be they more or fewer, the question of **the possibility of removing the Gasserian ganglion** has been investigated by Rose, Hartley, Krause, and Andrews, apparently independently of one another. The first question was whether the ganglion could be removed entire. According to Hartley,[3] the ganglion lies between two layers of dura mater in a space — the cavum Meckelii — which extends from the trigeminal impression on the petrous bone "to the angle of the supra-orbital foramen, the foramen rotundum and ovale," passing external to the cavernous sinus. It reaches the posterior apex of the clinoid process behind, and laterally extends to the external border of the internal opening of the carotid canal. The superior portion is closely attached to the inner layer of the dura mater, while the inferior surface is only loosely connected with the outer layer of that membrane. "It is not so difficult to remove as one would imagine." Krause[4] and Keen[5] seem to have demonstrated its possibility in the living subject, and have published reproductions of photographs of the excised ganglion, with portions of the second and third divisions, the stump of the first, the sensory root, and (in Keen's case) what was taken for the motor root as well. Horsley,[6] on the contrary, in dissections undertaken to test its separability, found that, while he could raise the inferior division and the lower half of the ganglion from its bed without damage to the carotid artery

[1] *Loc. cit.* [2] *Brit. M. J.*, 1892, i. 264. [3] *Ann. Surg.*, 1893, xvii. 511.
[4] *Deutsche med. Wchnschr.*, 1893, xix. 341.
[5] *Am. J. M. Sc.*, 1896, cxi. 59. [6] *Loc. cit.*

in its canal or to the cavernous sinus, any attempt to strip off the upper half of the ganglion invariably resulted in a tear of the cavernous sinus. "I believe,," he writes, "that the operation of complete removal of the Gasserian ganglion is not possible, but that in the operation which Mr. Rose has subsequently described only a portion of it can be taken away."

If we assume that Krause and Keen have disproved this contention, there still remains a second question of no small importance: **Will complete extirpation of this ganglion lead to destructive changes in the eye?** It has been commonly thought that severance of the ophthalmic division of the fifth nerve from the Gasserian ganglion led to progressive disorganisation of the eyeball, while by some the ganglion seems to have been considered as a kind of "trophic" centre for its nutrition. Quite recently Turner[1] has made experiments in conjunction with Ferrier, with the object of discovering whether any "trophic" influence is exercised by the fifth nerve or its ganglion. The experiments included division of the fifth nerve-trunk (between the ganglion and the pons), its ophthalmic branch, and the intramedullary roots. Of the eighteen experiments, in all of which anæsthesia of the cornea was marked, only two showed signs of inflammatory destruction of the eyeball, and in both instances there was evidence of septic infection. In one case, five days after section of the right ophthalmic branch, both corneæ were touched with caustic; an ulcer formed in both, but in neither eye did it spread, and the process of healing was as satisfactory on the one side as on the other. In another case, eight days after section of the trunk behind the Gasserian ganglion, an irritant got into the anæsthetic eye; conjunctivitis and corneal opacity followed, but eventually disappeared with the exception of a small central ulcer, which persisted till death. Dr. Turner concludes from these experiments that "there is no evidence of trophic influence exerted by the Gasserian ganglion upon the cornea; and that, provided septic organisms are excluded, the ophthalmic branch may be safely divided or the Gasserian ganglion removed without fear of the disorganisation of the eye." It should be mentioned, however, that Gaule is quoted[2] as having arrived (from similar experiments) at the conclusion that trophic changes did result from, and were due to, lesion of the ophthalmic branch, or Gasserian ganglion, but that they did not follow lesion of the trunk behind the ganglion. Exception is taken to these results on the ground of the rapidity with which they followed the experimental lesion. If we turn to clinical records for guidance on this point, we seem to find ample corroboration of Dr. Turner's views. A glance at the table of operations on the Gasserian ganglion will show that in many cases no remark is made of any ill effects produced on the eye, while in many more it is explicitly stated that no "trophic" disturbance occurred. This evidence, however, is entirely

[1] *Brit. M. J.*, 1895, ii. 1279. [2] *Ibid.*

fallacious, so far at least as the Gasserian ganglion is concerned. In none of the thirty-seven cases (with two exceptions—12 and 26) was the whole Gasserian ganglion removed. Rose [1] makes no attempt to isolate the ophthalmic division, and pulls away the ganglion "piecemeal," getting away as much as he can with forceps and curette. Keen [2] says: "It is very doubtful to my mind whether by the method [Rose's] we do more than partially destroy the ganglion; certainly we do not 'remove' it. In only two of my cases were any ganglion cells found in the tissue removed from the supposed position of the ganglion, and yet I endeavored to break it up and remove it as completely as possible." Tiffany does "not attempt to take away all the ganglion." [3] The crucial test lies in those few cases in which the entire ganglion (as far as we are aware) has been taken away. The one case in which Keen accomplished this (12 in the table), and another (11) in which "the destruction of the ganglion was more complete than in the first four," stand out in strong contrast to his others, in which no trouble was induced in the anæsthetic eye, although no special precautions were taken to protect it. In the last two cases, and especially that of complete extirpation, the eye trouble was most serious and threatening, and in the latter instance relapsed on three successive occasions; and all this in spite of extra care and protection by occlusive dressing, and stitching of the eyelids together. These cases, if they stood alone, would point very strongly to some nutritive influence which was abrogated by an entire removal or destruction of the ganglion. Krause, however,[4] has reported eight cases of complete removal of the ganglion, with one death, and of the seven survivors none had any eye trouble except one patient, who was suffering from chronic conjunctivitis at the time of the operation. A corneal ulcer formed, but was cured. The question, therefore, must be left still undecided.

The **value of the operation** itself, whether complete or partial, and the question as to which of the two is the best method, must be left to the test of time. As some guide to the present position of the operation, I have drawn up the accompanying table of all the operations on the Gasserian ganglion of which I could get records. I have excluded all cases of intracranial neurectomy of the second and third divisions, which have been included in some accounts; a measure which deserves consideration on its own merits, and should not be confused with the more extensive procedure. I have also omitted Mr. Horsley's case of avulsion of the fifth nerve trunk from the bulb by trephining the skull, opening the dura mater, and lifting the brain off the tentorium. Only one of Krause's cases occurs in the table, because I could not find any record of the other seven. The mortality is high, but will probably be lessened, and in skilled hands is already much smaller. Of the thirty-seven cases

[1] *Loc. cit.* [2] *Loc. cit.* [3] *Ann. Surg.*, 1894, xix. 56.
[4] Quoted by Keen, *loc. cit.*

	Surgeon.	Reference.	Sex & Age.	Duration of Disease.	Previous Operative Treatment.
1	Rose	*Brit. M. J.*, 1892, i. 263	F. 60	7 years	(*a*) Aug. 19th, 1888. Dental nerve stretched through mouth. (*b*) March, 1889. Half-inch dental nerve excised by trephining lower jaw. (*c*) March, 1890. Dental and lingual divided close to base of skull.
2	,, ...	,, ,,	F 63	10 years	All teeth, upper and lower, of right side extracted in 1884.
3	,, ...	,, ,,	F. 63	5 years	(*a*) Carious teeth removed. (*b*) Feb., 1890. Dental and gustatory divided close to base of skull.
4	,, ...	,, ,,	F. 37	12 years	(*a*) 1887. Half-inch dental nerve excised through trephine-opening in jaw. (*b*) July, 1890. Portions of dental and lingual removed close to base of skull.
5	,, ...	,, ,,	F. 37	7 years	Teeth extracted.
6	,, ...	*Lancet*, 1892, ii. 953	F. 56	...	... ...
7	Keen	*Am. J. M. Sc.*, 1896, cxi. 68	M. 41	13 years	13 operations, including removal of large part of upper jaw, as well as of various branches of nerves.
8	,, ...	,, ,,	M. —	8 years	(*a*) All right upper teeth removed. (*b*) 1889. Subcutaneous neurectomy (twice). (*c*) March, 1890. Antrum drilled, and in April several polypi removed and septum of nose straightened. Neurectomy of infra-orbital. (*d*) May and Nov., 1890. Same nerve resected again. (*e*) Jan. 31st, 1891. Right carotid tied.

Operation on Gasserian Ganglion.	Effects on the Eye.	Other Notes.	Result.
1 April 2nd, 1890. Ablation superior maxilla, trephining round foramen ovale and removal of ganglion.	Panophthalmitis—excision of eyeball.	—	Complete relief, Jan. 28th, 1892.
2 January 29th, 1891. Author's operation.	No trophic disturbance.	—	Complete relief, Feb., 1892.
October 29th, 1891. Author's operation.	For a time right eye painful and conjunctiva congested, but no ulcer.	February, 1892. Complained of inability to open mouth; remedied by forcible depression under anæsthetic.	Feb., 1892. Only complaint an occasional slight pain and intolerance of light in the right eye.
4 November 5th, 1891. Author's operation. Two trephine openings made and joined into one; ganglion seen and even felt.	Two—three weeks after operation crop of small subepithelial vesicles on cornea, which burst leaving a superficial ulcer. This healed under suitable treatment. Eye-pad worn for six weeks.	A little cerebro-spinal fluid escaped when ganglion was removed. Some epistaxis and vomiting of altered blood, probably from wound of Eustachian tube.	No recurrence, Jan. 27th, 1892.
5 January 16th, 1892. Author's operation. Dura mater wounded by trephine, exposing temporo-sphenoidal lobe.	—	Troublesome hemorrhage from pterygoid plexus; a small trephine opening. Thinks only the posterior half of the ganglion was removed.	Case only a few days old when reported.
6 Author's operation.	—	—	Do.
7 Hartley-Krause operation done in two stages; ganglion broken up.	No trouble.	Hemorrhage on lifting brain required packing with iodoform gauze (37 in. by 6 in.); left in three days. Respiration slowed & slight aphasia while it remained in.	Has had temporary twinges of pain, but otherwise quite relieved, twenty-six months after operation.
8 June 18th, 1894. Same operation, also in two stages; ganglion broken up.	Eye had been destroyed before operation, and was enucleated on July 3rd.	Hemorrhage as in last case.	Nov., 1895. Writes that he had lately had a short attack of pain.

	Surgeon.	Reference.	Sex & Age.	Duration of Disease.	Previous Operative Treatment.
9	Keen	*Am. J. M. Sc.*, 1896, cxi. 68	F. 63	12 years	(*a*) 1889. Neurectomy of dental nerve (*b*) Feb., 1892. Dental and lingual nerves removed through vertical ramus.
10	„	„ „	F. 60	5 years	Five operations; the last, division of second and third divisions at foramen rotundum and ovale.
11	„	„ „	F. 54	12 years	(*a*) All teeth removed. (*b*) 1888. Half-inch dental nerve excised. (*c*) 1891. One-and-a-half inches dental avulsed, and removed superior maxillary nerve, dividing it well behind infra-orbital canal.
12	„	„ „	M. 33	5 years	(*a*) March, 1895. Right upper teeth and alveolar process removed. (*b*) Since then three operations, including removal of infra-orbital nerve and opening of the antrum.
13	Lanphear ...	*Pacific M. J.*, 1892, xxxv. 647. Abstract in *Annual Univ. M. Sc.*, 1894, iii. A-69	...	...	... ...
14	Baker ...	*Am. J. M. Sc.*, 1894, cvii. 291	M. 52	16 years	(*a*) Division of distal ends of the three divisions at their foramina of exit.
15	Caponotto...	*Policlin.*, Feb. 1, 1895. Abstract in *Brit. M. J.*, 1895, i., Epitome, p. 37	M. 20	From childhood	... ...

Operation on Gasserian Ganglion.	Effects on the Eye.	Other Notes.	Result.
9 February 20th, 1895. Same operation.	No trouble.	Assistant placed drill in his mouth, when Dr. Keen's back was turned.	Died in a week. Septic meningitis.
10 May 23rd, 1895. Same operation, in two stages. Ganglion broken up.	No trouble.	The gauze plug measured 23 in. by 14 in. Removed on third day. Temperature was 100°—101° F. till fifth day. Slight discharge continued from the two ends of incision, and some pieces of bone discharged.	Entirely free from pain six months after.
11 October 6th, 1895. Same operation. The second & third divisions tore away from ganglion, which was scooped out with curette.	Third day, eye red and corneal ulcer formed. It deepened and was very threatening; but with long-continued treatment and bandaging the eyes, she went home with "a distinctly healing ulcer."	Troublesome hemorrhage from posterior branch and trunk of middle meningeal.	Went home Nov. 27th, 1895.
12 November 29th, 1895. Same operation; but as preliminary, eyelids stitched together. Ganglion removed entire with sensory and motor roots.	Stitches in eyelids taken out, on fourth day; cornea clear. Within 24 hours ulceration began. On sixth day lids re-stitched. In four days corneal irritation subsided, and the next day the lids separated. Eye protected by gauze-dressing. In two days after, ulceration again started. Lids stitched together again. "The eye is now improving."	On lifting brain, "furious hemorrhage" from middle meningeal —secured with difficulty. On tearing out ganglion profuse hemorrhage: supposed to be from aperture in cavernous sinus, whence 1st division was torn. Required packing with iodoform gauze. The temperature rose steadily, reaching 104° the next morning, and complained of bad headache. Both conditions relieved within an hour after removal of plug.	Quite free so far (three weeks).
13 Rose's operation.	—	—	No recurrence, one year after.
14 June, 1894. Rose's operation.	—	—	Died of shock in 38 hours.
15 Ganglion reached by a combination of Rose's and Krönlein's operations. May, 1891.	—	A cholesteatoma, size of nut, found where root of trigeminus enters pons. Eustachian tube wounded.	Died on fourth day of acute septicæmia. Septic inflammation of wound, and meningitis.

	Surgeon.	Reference.	Sex & Age.	Duration of Disease.	Previous Operative Treatment.
16	Doyen ...	*Arch. prov. de Chir.*, iv. 7, 1895. Abstract in *Ann. Surg.*, 1896, xxiii. 73	F. —	...	... ...
17	„	„ „	...	...	... ...
18	„	„ „	...	...	... ...
19	D'Antona ...	*Brit. M. J.*, 1893, i. 81	F. —	...	... ...
20	Rogers ...	*Am. J. M. Sc.*, 1895, cx. 63	M. 45	8 years	(*a*) Several right lower teeth extracted. (*b*) All remaining teeth drawn. (*c*) Nov., 1892. Neurectomy dental nerve in dental canal.
21	Park	*Med. News*, 1893, lxii. 183	M. 53	5 years	... ...
22	„	„ „	F. 54	...	... ...
23	Tiffany ...	*Ann. Surg.*, 1894, xix. 47	F. 59	14 years	(*a*) Division of infra-orbital at its foramen.
24	„ ...	„ „	F. 79	30 years	No previous operations.
25	„ ...	„ „	F. 46	7 years	(*a*) 1882. Excision of one inch of dental nerve through maxilla.
26	Krause ...	*Deutsche med. Wchnschr.*, 1893, xix. 341. Abstract in *Brit. M. J.*, 1893, i., Epitome, p. 77	F. 68	20 years	(*a*) Division of inferior dental nerve. (*b*) Division of inferior maxillary trunk.
27	Parkhill ...	*Med. News*, 1893, lxiii. 319. Abstract in *Brit. M. J.*, 1893, ii., Epitome, p. 65	F. 60	8 years	(*a*) Division of infra-orbital at its foramen. (*b*) All three branches divided at their facial foramina. (*c*) Another operation on second division

Operation on Gasserian Ganglion.	Effects on the Eye.	Other Notes.	Result.
16 March 6th, 1893. Author's operation.	Function of eye intact. Vision perfect.	No trophic disturbance.	No recurrence two-and-a-half years after.
17 Same operation.	—		Died suddenly of apoplexy ten days after operation.
18 Same operation.	—	—	Died in four days. No cause found except extreme feebleness of patient.
19 December 19th, 1892. Modification of Rose's operation.	—	Epileptiform tic. Convulsive movements of hand and tongue—as many as 100 attacks a day.	Doing well.
20 May 23rd, 1893. Rose's operation. Excision of the three divisions at ganglion, with partial destruction of latter.	It was two months before eye could be left uncovered without some irritation manifesting itself.	Ganglion could not be seen at operation. Aneurysm needle and sharp hook passed up to its presumed site, and "what seemed to be the ganglion" picked away.	No recurrence, Sept. 12th, 1893.
21 Rose-Andrews operation, and avulsion of supra-orbital nerve through separate incision.	—	Tied common carotid for hemorrhage in pterygoid fossa.	?
22 Same procedures.	—	Five per cent. antipyrin spray used to check hemorrhage in maxillary fossa and skull.	?
23 September 8th, 1892. Hartley-Krause operation. The nerves and "as much of the ganglion as seemed to be attached to them" removed.	No disturbance in nutrition or function of eye.	Great flow of cerebro-spinal fluid, continuing some days; but wound healed in seven days.	No recurrence thirteen-and-a-half months after.
24 June 30th, 1893. Hartley-Krause operation.	Do.	Flow of cerebro-spinal fluid.	No recurrence four months after.
25 September 25th, 1893. Do.	Do.	Dura mater purposely opened to let off the cerebro-spinal fluid. This gave more room for manipulation.	Pain entirely relieved.
26 January, 1893. Author's operation. The whole ganglion with nearly an inch of sensory root removed.	—	—	Quite relieved nine weeks after.
27 September 14th, 1892. Rose's operation.	—	—	No recurrence ten months after

	Surgeon.	Reference.	Sex & Age.	Duration of Disease.	Previous Operative Treatment.
28	Finney ...	*Johns Hopkins Hosp. Bull.*, 1893, iv. 91. Abstract in *Brit. M. J.*, 1893, ii., Epitome, p. 101	F. 47	...	... ...
29	„ ...	„ „	M. 63	...	... ...
30	„ ...	„ „	M. 69	...	... ...
31	O'Hara ...	*Austral. M. J.*, 1893, xv. 513	F. 66	5 years	All teeth extracted.
32	Novaro ...	*Riforma med.*, Nov. 7, 1893. Abstract in *Brit. M. J.*, 1893, ii., Epitome, p. 102	...	...	... ...
33	Gerster ...	*Med. Rec.*, 1895, xlvii. 803. Abstract in *Am. J. M. Sc.*, 1895, cx. 713	M. —	...	(*a*) Two years previously, Carnochan's operation on infra-orbital. (*b*) One year later, entire cicatrix removed for recurrence.
34	„ ...	*Ann. Surg.*, 1896, xxiii. 58	F. 34	7 years	(*a*) Nov., 1894. Excision of second branch (Lossen's operation).
35	Abbe	*Ann. Surg.*, 1896, xxiii. 60	F. 65	10 years	... ...
36	Andrews ...	*Internat. M. Mag.*, 1893, i. 479	F. 62	5-6 years	... ...
37	„ ...	„ „	F. —	10 years	... ...

	Operation on Gasserian Ganglion.	Effects on the Eye.	Other Notes.	Result.
28	Hartley-Krause operation.	—	—	Two months after complained of stiff and sore feeling on right side of head, but very different in character from the pain felt before.
29	Do.	—	Severe and obstinate vomiting for 2–3 days after operation.	No pain one month after.
30	Do.	—	—	Died in seven hours from heart-disease and shock.
31	June 27th, 1893. Rose's operation.	—	Eyes washed with 1 in 25,000 corrosive sublimate solution, and eyelids sutured together. External meatus plugged. Slight cerebro-spinal escape at operation. Zygoma necrosed.	No return up to Sept. 15th, 1893.
32	Beginning of 1891. Modification of Krönlein's operation — destroying ganglion at its inferior and posterior part.	—	During last year sensibility to pain, as well as to heat and touch, returned; but now the pain shoots from below upwards.	No recurrence.
33	Hartley-Krause operation, in two stages. Ganglion removed in pieces.	—	Packing required for venous hemorrhage; removed, and operation completed on third day. Temperature rose to 102° F., and remained there.	Died on eighth day. After death no evidence of meningitis, but a focus of red softening in base of temporo-sphenoidal lobe.
34	July, 1895. Hartley-Krause operation. Ganglion avulsed.	—	Much headache at first. A good quantity of serum escaped on removing gauze-drain on 5th day. Healed by August 23rd.	No recurrence up to Oct. 23rd, 1895.
35	October 14th, 1895. Hartley-Krause operation. Ganglion curetted.	—	Packed wound for hemorrhage, removing gauze in 24 hours. Recovered well.	No recurrence of pain. Died in three months from another cause.
36	Author's operation.	After a time ulceration of the cornea occurred, but healed.	Patient was requested to keep eye covered with a compress most of the time.	No return five months after.
37	Do.	—	Not heard of since discharge, a month after operation.	Complete relief while under observation.

seven died from the effects of the operation, or 18.9 per cent. The deaths were nearly equally distributed among three methods of operation—viz., Hartley-Krause method 3, Rose's method 2, and Doyen's method 2.[1] Dr. Keen [2] gives the mortality by Rose's method as 18 per cent., and by the Hartley-Krause method as only 9.8 per cent. My table shows no such superiority of one method over the other, and Rose himself has had no death. The next point of importance is the immunity from recurrence. This cannot yet be stated with any certainty, for time enough had not elapsed in any of the recorded cases to allow of a confident judgment. The longest interval of freedom is 2½ years, then 26 months (some temporary twinges—doubtful if true recurrence—No. 7), 22 months, a year or 13 months (three cases), and 10 months. But it is a significant fact that no single case has failed to be completely relieved after the operation, and in only 4 of the 37 cases had there been (up to the time of report) even the slightest relapse, and it was doubtful if any of the four exceptions were recurrences. Time, however, only can finally settle this point. Krause [3] concludes that this operation is justified only when (1) all the known sources of relief have been exhausted, but, above all, the lesser operation for neurectomy been tried; (2) the severity of the symptoms are such as (after such failure) to justify resort to an operation of this gravity. Nothing in the present state of our knowledge can be added to, or taken from, that statement.

The **ganglion can be exposed** by two methods: (1) that devised by Rose,[4] with which Professor Andrews's [5] is practically identical; and (2) the Hartley-Krause method, named after the two surgeons who independently planned an operation essentially the same. In the **Rose-Andrews operation** the foramen ovale is exposed in the pterygoid fossa, a disc of bone is removed by a trephine applied just outside the foramen, and the hole enlarged into the foramen and in any other direction required. The third division is used as a guide to the ganglion. The **Hartley-Krause method** [6] exposes the ganglion from above, the cranium being opened by an osteo-plastic flap in the temporal region. The dura mater is not opened, but is gently stripped from the middle fossa up to and over the ganglion and its divisions, the temporo-sphenoidal lobe being lifted up by a broad spatula. If it is wished to remove the ganglion entire, this should be seized first with a pair of artery forceps, and after it has been secured, the second and third divisions cut at their foramina, when, by a gentle but firm rotation of the forceps, the ganglion and its divisions can be avulsed, usually with the sensory root and the motor root as well. If the second and third divisions are cut before the ganglion is seized and avulsion made through

[1] Described in *Ann. Surg.*, 1896, xxiii. 69. It should be stated that these two deaths occurred in three operations. [2] Quoted from Krause, *loc. cit.*

[3] *Berl. klin. Wchnschr.*, 1892, xxix. 734. Quoted in *Annual Univ. M. Sc.*, 1893, iii. K-50. [4] *Loc. cit.* [5] *Internat. M. Mag.*, 1893, i. 479.

[6] Described by Keen, *loc. cit.*

them, they are very apt to tear off. In one of his cases Tiffany[1] thought he recognised the motor branch of the third division before cutting it, and suggests that an effort should be made to preserve it. This would prevent the paralysis of the muscles of mastication. It seems to have occurred not infrequently that in separating the ganglion the sub-arachnoid space has been opened with escape of the cerebro-spinal fluid, sometimes in large quantities. This has apparently not interfered with the healing of the wound, and Tiffany[2] even goes so far as to puncture the dura mater to let off the fluid, and finds he can get a better view with more room for the necessary manipulations. In the general treatment of these cases the chief point requiring notice is the protection of the eye. Rose and Keen both recommend closing the eye before beginning the operation, either by stitching the lids together with horse-hair, or by means of semi-lunar pieces of sticking-plaster fitted to each lid and tied together by silk tags.[3] Before closure of the lids the eye is to be washed with a 1 in 2000 solution of corrosive sublimate.[4] Both eyes should be kept covered for a week, but the eye on the side of the operation for three or four weeks at least. Mr. Rose further advises in his operation that the external meatus should be cleansed and plugged.

W. M. Barclay.

OPHTHALMOLOGY.

At the recent Congress of Oculists at Heidelberg, Dr. Hori, of Japan, described[5] a case of **hepatic amblyopia.** A man, aged 40, suffering from jaundice and diarrhœa, due to a neoplasm in the bile-ducts, developed colour-blindness for red and green, with general amblyopia. No perceptible ophthalmoscopic changes in the fundus could be detected. Septic keratitis, and dryness with atrophy of the conjunctiva supervened. After death an œdema of the retina was discovered, which accounted for the amblyopia. Prof. Leber stated that he had met with several cases of hemeralopia—defective vision by dull light—in jaundice, which he had attributed to retinal œdema, with impaired secretion or increased destruction of the retinal purple. Dr. Meyer mentioned cases of malarial fever with hepatic affections associated with hemeralopia, particularly among colonists; he had found pigmentation and other changes in the walls of the retinal arteries. It would be well to examine the liver in cases of hemeralopia, even where no jaundice is present, as the eye symptoms may be the earliest indications of hepatic defect.

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[1] *Ann. Surg.*, 1894, xix. 47. [2] *Ibid.*
[3] *Am. J. M. Sc.*, 1896, cxi. 67.
[4] *Brit. M. J.*, 1892, i. 262. [5] *Med. Week*, 1895, iii. 398.

Detachment of the retina is undoubtedly a very rare **sequel of albuminuric retinitis**, but at one of the meetings of the Clinical Society of London[1] Dr. Samuel West mentioned two cases. (1) A woman, aged 22, presented the usual symptoms of granular kidney with retinitis. The nephritis had commenced seven years previously, in an acute attack. Shortly after her admission to the hospital a general purpura appeared, but lasted only a few days. After it both retinæ became detached, apparently not as a consequence of hemorrhage, though a large and very painful post-ocular hemorrhage occurred about the same time. (2) A young man, with granular kidney, who had been apparently in good health until two months previously. His sight had been complained of for a week only, but he was admitted to hospital practically blind; the eyes showed a marked degree of albuminuric retinitis. Seventeen days later detachment of the left retina was discovered, for which no special cause seemed apparent. A few days later he died of diarrhœa and asthenia.

The opinion appears to be universally held that the appearance of retinal complications in albuminuria makes it probable that the disease is in an advanced stage and will be rapidly fatal. Where the retinitis is complicated by detachment of the retina, or by hemorrhages of a purpuric nature, the prognosis would probably be increasingly grave.

I have seen, in two cases, a very large **vitreous hemorrhage** complicate retinitis **with albuminuria**. One of these was a woman of 50, who showed well-marked retinitis with hemorrhage and œdema apparently of albuminuric type, but no albumen could be discovered in the urine, which was of low specific gravity, until several weeks after she first came under observation. Before albumen was detected by chemical examination, the fundus reflex of one eye became completely hidden by a vitreous hemorrhage, which appeared to occupy the whole chamber. Meanwhile albumen appeared in the urine, and the patient's condition became precarious from dropsical effusions. Improvement gradually occurred, the albumen disappeared, the synchysis of the vitreous cleared so that the eye fundus could be seen in some detail, while the retinitis of the other eye almost entirely cleared up, very few small hemorrhages alone remaining. This case shows that the appearances of retinal complications in albuminuria may again disappear, and that such retinal complication does not always mean that the case will be rapidly fatal. Dr. Hale White, at the meeting of the Clinical Society already alluded to, related a case in which, despite the continuance of Bright's disease, well-marked retinitis had become completely resolved—he is of opinion that interstitial nephritis is rapidly fatal under thirty years of age.

The association of retinitis with albuminuria in pregnant women demands early recognition and immediate delivery of the

[1] *Tr. Clin. Soc. Lond.*, 1895, xxviii. 100.

child, and while delay of interference may result in blindness from a ruined retina, if not in death from puerperal eclampsia, a timely delivery is generally followed by complete recovery both of the kidneys and of the eyes.

The serious prognosis of albuminuric retinitis is largely due to the tendency of an analogous vascular breakdown in the circulation of the brain, and death from cerebral hemorrhage is the not infrequent sequel of cases where the symptoms of the disease produce no very great discomfort, either in the sight or in the general health.

* * * *

Disorganisation of the vitreous with synchysis appears but seldom materially to improve. Abadie made an interesting communication to the Paris Academy of Medicine[1] of the good result of electrolysis in such cases. A patient shown to the members had, eighteen months before, during an uncontrolable fit of anger, begun to lose his sight, and in a space of two or three hours was practically blind. His eyes were not examined at this time, but eight months afterwards the vitreous body of each was found to be disorganised, probably from intra-ocular hemorrhage. Some months later Abadie punctured the left eye by a fine iridised platinum needle 8 mm. long. This needle was connected with the positive pole of a continuous current battery, the negative pole of which was applied to the arm. A current of three or four milliampères was passed through the circuit for five minutes. The following day the patient commenced to count fingers, and the fundus of the eye, till then quite obscure, could be illuminated by the ophthalmoscope. Gradual improvement continued. At the end of a month the patient could go about alone, could read the names of streets and the number of the houses. The right eye, which had not been treated, remained in a sightless condition with dark and opaque vitreous. Abadie states that he has since similarly treated an analogous case, in which the vitreous was disorganised by successive hemorrhages. This also was cured.

* * * *

At the Medical Society of Buda-Pesth[2] Dr. Grosz reported a case of **amaurosis produced by male fern**. A man, aged 29, had been given by a pharmacist capsules containing ethereal extract of male fern and extract of pomegranate. He took about eight grammes of the combined medication, after previously taking castor oil. Hitherto vision had been perfect in the right eye, somewhat weak in the left. In the evening he had syncope, the next day severe diarrhœa, and two days later he was blind in both eyes. On examination there was complete mydriasis, no pupil reaction to light. At first the fundus of each eye was normal, but little by little both lost their colour, and became

[1] *Ann. d'Ocul.*, 1895, cxiv. 134. [2] *Ibid.*, 207.

atrophic. The noxious influence was attributed to the extract of male fern, which is toxic in doses of four to five grammes.

Prof. Masius reported to the Academy of Medicine of Belgium [1] the results of some experiments on dogs, made to ascertain whether the amaurosis, which he had also noticed in two cases to follow the administration of oleoresin of male fern for ankylostomata, was due to the anæmia caused by the worms, or to the remedy used to destroy them. Of four dogs two rapidly became blind after taking large doses of the male fern. In a later communication Masius [2] gave the result of researches he had made with Dr. Mahaim on the anatomical lesions of the optic nerve produced in poisoning by the oleoresin of male fern. The primary lesion is vascular, and consists in proliferation of capillaries with cell infiltration of the perivascular space. This determines at a very early date strangulation of the optic nerve in the foramen opticum; later on nothing is found at this spot but a homogeneous mass constituting a thick wall for the capillaries. Further advance shows disappearance of the nerve fibres, the last ones to persist being those situated near the retina.

Poulson of Strasburg has lately shown that among the extractives from male fern, anhydrous crystalline filicic acid is neither a poison nor a vermifuge, while amorphous filicic acid possesses both these properties in a high degree. Van Aubel of Liége [3] attributes the amaurosis to filicic acid, which stimulates the central nervous system, especially the spinal cord, and may, by extending to the sympathetic system, cause dilatation of the pupils, stimulation of the vasomotor nerves, and contraction of the central arteries of the retina; on this hypothesis strychnine and nitrite of amyl might be useful remedies.

Dr. Hilbert,[4] a German physician, has had under observation a middle-aged man, who to cure headache took a gramme and half an hour later two grammes of **acetanilide** (antifebrin). The headache soon ceased, but the patient was affected with vertigo, noises in the ears, and defective vision, so that he could barely see fingers at a foot. The skin and mucous membranes were pale. There was no reaction of the pupils, the optic discs were bloodless, the retinal vessels were contracted: all these phenomena, including amblyopia, yielded promptly to inhalations of amyl nitrite.

* * * *

For purposes of accurate ophthalmoscopic examination **a mydriatic** is often necessary: and patients are caused considerable discomfort by the somewhat prolonged effect of nearly all drugs that produce sufficient dilatation of the pupil. The effect of homatropine lasts for, at any rate, a day, while atropine causes inconvenience for upwards of a week. Cocaine is scarcely

[1] *Med. Week*, 1895, iii. 321.
[2] *Ibid.*, 585. [3] *Ibid.*, 479. [4] *Ibid.*, 430.

active enough. Dr. Groenouw has recently suggested[1] the following solution:

Hydrochlorate of Ephedrin ...	1 part.
Hydrochlorate of Homatropine	$\frac{1}{100}$,,
Distilled Water	10 parts.

This is said to produce a maximum pupil-dilation in half-an-hour, and to leave no effects after one hour. The transient mydriasis is not associated with any change of the ciliary muscle.

F. R. Cross.

Reviews of Books.

Text-book of Diseases of the Kidneys and Urinary Organs. By Professor Dr. Paul Fürbringer. Translated by W. H. Gilbert, M.D. In Two Volumes. Vol. I. Pp. 194. London: H. K. Lewis. 1895.

The translation of this book will certainly meet a want, for it is not only a thoughtful treatise on diseases of the kidneys by a man of high abilities and great industry. but it supplies a readable account and criticism of the chief views held in Germany at the present time on renal matters. It is, perhaps, not a disadvantage that English and American authorities do not appear so often in these pages as Continental ones, since space is thus gained for the discussion of much valuable work too little known in this country. The translation is on the whole well done and clear, though here and there an obscure sentence appears, and German idioms are very frequent. It is a pity that care has not been taken to exclude such words and phrases as "typic nephritis," "cliniater," "it can cause in its generality," or again "these authors believe to have found the cause." Still, these blemishes are rare, and the meaning is, as a rule, well expressed.

The chief value of the book lies in the vast store of facts and observations from all quarters which the author has collected and discussed critically. A good example of this is shown in his review of the various theories of uræmia. The value of recent investigations is carefully pointed out; but he comes to the conclusion that uræmia is only a name for various disorders consequent on the retention of poisonous products, though what these substances are there is not as yet sufficient evidence to decide. Even then he remarks upon the difficulty that exists —though not perhaps an insuperable one—in accounting for uræmic disturbances which correspond to local cerebral dis-

[1] *Ibid.*, 166.

turbances. In the management of uræmia, he relies chiefly on diaphoretics, but mentions the failure that pilocarpin has been in his hands. Baths, careful purgation, and venesection have frequently proved of value.

After reviewing the work that has been done since his first edition in 1884, he classifies the forms of Bright's disease (besides circulatory disturbances) into acute and chronic diffused nephritis, contracted kidney, and amyloid degenerations. Thus he does not admit essential differences between parenchymatous and interstitial affections. The genuine contracted kidney, however, forms a distinct type produced by various processes, most often from a lingering nephritis. On the question of renal casts, he attaches importance to the presence of metamorphosed epithelial ones as showing decided disease; but he adds, rightly, that all casts are absent in many advanced cases. On the whole, we notice the great caution which leads him to reject as unproven many views which he acknowledges have much to be said in their favour.

We presume that with the second volume an index will be provided for the whole work.

Diseases of the Joints and Spine. By HOWARD MARSH. New and Revised Edition. Pp. xvi., 532. London: Cassell and Company, Limited. 1895.

The new edition of this work has been published nine years after the first edition, and so many changes have taken place in our knowledge of joint diseases during this period that the author has done wisely to re-write many chapters, and to make considerable alteration in others, so as to give us now what is almost a new book on the subject. We took occasion to point out in our review of the first edition that the author's strong point was evidently not pathology, and although we notice a great improvement in the present edition, yet the work is still mainly clinical. We are happy, however, to be able to say that from a clinical standpoint the book is excellent. It gives in a very readable manner a somewhat brief, though sufficient, account of the various forms of joint disease, illustrated by numerous cases which have come under the author's observation, while it gives also a slight outline of the pathological changes met with in these various forms of disease.

Mr. Howard Marsh's methods of treatment are eminently conservative, though marked by sound judgment. We are glad to see that credit is given to a Bristol surgeon (Mr. F. R. Cross) for the first suggestion of erasion of joints for tuberculous disease. We notice, however, that, like most other surgeons of experience, the author takes a very doubtful view of the value of this operation, except in a few selected cases, and he is rather disposed to limit its usefulness to the elbow and ankle. Two chapters are introduced giving a short account of the principal

diseases of the spine, treating this subject almost from a clinical point of view: this will distinctly add to the value of the book; for the author's experience in the management and treatment of the various forms of spinal disease has been very extensive, and he speaks with authority upon this subject. The book is eminently readable, being well written and illustrated.

Leprosy: in its Clinical & Pathological Aspects. By Dr. G. Armàuer Hansen and Dr. Carl Looft. Translated by Norman Walker, M.D. Pp. xi., 162. Bristol: John Wright & Co. 1895.

The clinical history of leprosy has been long and well written; but until recently no scientific description of its etiology and pathology could be held worthy of much estimation, because the discovery of the bacillus of leprosy, though made by Hansen as far back as 1871, was not clearly demonstrated until several years later, when improvements in the construction of immersion lenses left no doubt about the connection between the bacillus and the manifestation of this ancient and dire disease. Even to this time the demonstration is not scientifically proved; for there has been no successful inoculation of man and animals with the bacillus.

Having made these explanations, we have much pleasure in speaking in high terms of the work before us, which embodies the experience of two Norwegian physicians of large experience. The division of the disease into two main classes—the "nodular" and the "maculo-anæsthetic"—is simple and true. All cases come under one or both of these headings, the "leonine condition" being a high type of the first; and the neuritic cases, with their consequent motor and sensory pareses, good examples of the latter; and, between these, cases of an intermediate kind—the same disease, but of varying intensity according to the action of the bacilli. The "virulence of the bacilli seems to depend, not so much on any constant character of their own, as on the soil in which they live" (p. 79). One point is very clearly brought out; viz., that there is no such thing as leprosy of the lungs, intestines, bones, kidneys, and muscles. There may be secondary changes in these parts, and tubercular deposits in lungs and intestines, amyloid degeneration of kidneys and other viscera, and true deformities in joints and bones from muscular atrophy dependent upon neuritis—but not leprosy.

The chapter on Etiology is very interesting; and the question as to heredity of leprosy is fully dealt with, and disposed of negatively. In the town of Bergen the descendants of lepers may certainly be numbered by thousands, yet not one of them has developed the disease. The Leprosy Commission found only five or six per cent. of cases in the direct line; but children of perfectly healthy parents were leprous. Leprosy is undoubtedly contagious; but not hereditary. The chapter on treatment

is fairly exhaustive, and shows how all the vaunted remedies, from flesh of crocodile and serpent, fat of lions and bears, to Koch's tuberculin, and all the oils pretty nearly in creation, are practically valueless. The consideration of this point is very important, because it enhances the value of the best known methods of treating this intractable disease; viz., by isolation and the enforcement of great cleanliness. Theoretically, the great desideratum of treatment would seem to be the destruction of the bacilli; but hitherto no remedies have done this. Chaulmoogra oil, pressed from the seeds of the gynocardia odorata, externally and internally applied, has been highly exalted; but looking over the records of a number of cases, it seems to us that the great cleanliness of the skin which is observed can well be credited with the good results which have attended some cases. "Later trials of the treatment in India have had the same negative results as in Norway" (p. 111).

In the work before us there is no allusion to the treatment suggested by Dr. Impey, of Robben Island. He has had large experience of the disease, and attaches great importance to the fact that certain febrile affections of the skin, *e.g.*, erysipelas and dermatitis, often caused the disappearance of the symptoms of leprosy, anyhow for a time; and he considers that the production of these affections, or attempts at it, by artificial means, might be productive of greater, if not permanent, benefits in the earlier stages of the complaint.

The tables towards the end of the volume, setting forth the salient points in cases of both forms of leprosy, the coincidence of tuberculosis, the ratio of the two forms of the disease, and the results of isolation in Norway, are well worth consulting; and the graphic plates of patients, the victims of leprosy, and of the bacilli and globi which are so characteristic, are exceedingly good, and some of them well coloured. The work is written clearly, and appears to us well translated. There is not an ambiguous sentence throughout; and anyone who wants information on the subject, cannot do better than consult the pages which Dr. Walker's care and energy have made acceptable.

Although the volume has an excellent and full table of contents, an index should also have been provided.

The Diseases and Deformities of the Fœtus. By J. W. BALLANTYNE, M.D. Vol. II. Pp. xi., 264. Edinburgh: Oliver and Boyd. 1895.

This the second volume of Dr. Ballantyne's admirable work on ante-natal pathology is devoted to congenital diseases of the subcutaneous tissues and skin. The diseases chiefly considered are sclerema neonatorum and ichthyosis. The references to the literature of the various forms of skin disease are very abundant, and the work is, as all Dr. Ballantyne's books are, evidently the result of much laborious study, and is a very valuable guide to the subject of which it treats.

The Care of the Baby. By J. P. CROZER GRIFFITH, M.D. Pp. 1-8, 17-392. Philadelphia: W. B. Saunders. 1895.

In writing a hand-book for mothers and nurses without confusing his readers with scientific words, Dr. Crozer Griffith has succeeded where many others have failed. From cover to cover his book contains excellent advice tempered with sound common sense, and we sincerely hope that it will have the wide circulation it deserves; for the mother in the United States seems to be as ignorant as the one on this side of the water.

The book is well printed; but it was hardly necessary to give a picture of a knitted sock or of a bassinet.

Mentally-Deficient Children: their Treatment and Training. By G. E. SHUTTLEWORTH, M.D. Pp. xiv., 140. London: H. K. Lewis. 1895.

The author has given in moderate compass a good account of his subject, with which, by long experience, he is well qualified to deal. The medical practitioner is often called upon to advise the parents as to what extent of mental development may be expected in a mentally deficient child, and as to what treatment and training should be adopted. We think this book will be of real service in giving succinctly the information necessary to arrive at a right conclusion. It opens with a short historical retrospect as to what has hitherto been successfully accomplished in the way of training at institutions for idiots and feeble-minded children. After an account of the pathological changes found in such cases, the author discusses the questions of etiology, prognosis, and diagnosis in the different forms of feeble-mindedness. In the remaining chapters the treatment, medical, moral, and educational, is fully considered, and the best mode of training described. These chapters contain much sound practical advice; and as the work is well and clearly written, and the illustrations well selected, we think that it will be found useful.

A Manual of the Modern Theory and Technique of Surgical Asepsis. By CARL BECK, M.D. Pp. 306. Philadelphia: W. B. Saunders. 1895.

In the frequent washing of patients before operation of the Hippocratic era, and the ablutions ordained by Mosaic rite, Dr. Beck sees early gleams of the modern aseptic treatment. It is a regrettable fact that many surgeons have not yet grasped the essential difference between antisepsis and asepsis, thinking that their responsibility ends when they have dipped their fingers in some potent chemical fluid, and to such this book may be commended; for in clear and intelligible language the doctrine of asepsis, the offspring of antisepsis, is set forth. The book is

most essentially practical, and thus serves a very useful purpose; but on the theoretical side it will not be found to possess any further advantages to those who have already become familiar with other recent works on this important subject. Most of the remarks on anæsthesia and the surgical treatment of tuberculosis seem to us outside the domain of such a treatise, and might be omitted with advantage. The book is excellently illustrated, and orthographical errors are few; "natrum," however, occurs on p. 106. The type is good, the index most complete, but the binding is somewhat deficient.

The Theory and Practice of Counter-Irritation. By H. CAMERON GILLIES, M.D. Pp. xii., 236. London: Macmillan & Co. 1895.

Counter-irritation has of late fallen rather into disuse, and mainly on theoretical grounds. "The theorist is always the pioneer of scientific progress," and hence the need for a review of our position with regard to counter-irritation. No one applies a remedy without some theory as the motive and justification of his action, and no one ever gave up a theory because of discouraging results. Some people dislike theories, and profess to be superior to them: they act, and despise thought; but few of us are able to act efficiently without theoretical supports.

The author reviews at considerable length the history of the idea; but he does not wish to be esteemed an apostle of counter-irritation: he expresses himself "more in sympathy with those who hold that 'the Devil himself, old Beelzebub, is nothing but a great Canthárid' (Baynard) than with those who would commend twelve consecutive applications of actual cautery for the cure of sciatica (Peter)." He combats many of the older interpretations such as were implied in words like revulsion, derivation, evacuation, vicarious action, and metastasis: these "should be allowed to fall out of medical terminology." And then he enunciates his own theory, which is based upon the idea that inflammation is a reparative process, that it is the name given to a process of physiological activity which is directed to the repair of an injury; and hence it follows that "whatever good comes by the use of counter-irritants is because, by their irritant effects, they stimulate the activity of the tissues of the part to which they are applied and accelerate the blood supply thereto, so increasing nutrition or repair as the need may be." He maintains that the essential action of a counter-irritant is to quicken the circulation in the part to which it is applied: and on this fact depend its uses in quickening the process of repair, in giving relief to pain, in promoting absorption and removal of pathological products, in aiding and accelerating the natural effort to throw off dead tissues, in removing a state of passive congestion, in rousing from a state of unconsciousness,

and in drawing poisonous products from the tissues. Clearly the book is one to be read and digested.

Herbal Simples approved for Modern Uses of Cure. By W. T. FERNIE, M.D. Pp. xvi., 432. Bristol: John Wright & Co. 1895.

Dr. Fernie has brought together in this volume a large mass of information concerning vegetable remedies in use now or in past days. His researches into old Herbals and such like books have been extensive, and very interesting is the result of his labours. Not contented with solely giving the virtues which each plant is reputed by tradition to possess, he also endeavours to show the active principles upon which the pharmacological and therapeutical properties of each remedy depend. At times he would seem to draw to some degree upon his readers' credulity. For example, he says that the Sundew "given experimentally to cats has been found to stud the surface of their lungs with true tubercular matter. . . . Meantime it has been well demonstrated (by Dr. Curie, and others) that at the onset of pulmonary consumption in the human subject a cure may nearly always be brought about, or the symptoms materially improved, by giving the tincture of *Sundew*." The substances treated of are arranged alphabetically, so that the brief therapeutical index provided is all-sufficient.

Medical Partnerships, Transfers, and Assistantships. By WILLIAM BARNARD and G. BERTRAM STOCKER. Pp. xi., 249. London: Stevens and Sons, Limited. 1895.

In the preface of this eminently useful work the authors call attention to the fact that no text-book dealing with the subject here treated has ever been published before, and that each draftsman has had to evolve a scheme out of his own brain, unaided by experience or knowledge of the customs of our profession. No one now can blame anyone but himself if the solicitor, who draws up his agreement, fails to fully protect him from the wiles of a dishonest partner or principal, or from the accidents and differences which may at any time occur in the course of a partnership. To a medical mind the book is stiff reading; for legal phraseology is not the easiest in the world, nor are the decisions of judges always expressed in the clearest language.

In Part I., Mr. Stocker's wide experience as Managing Director of the Scholastic, Clerical, and Medical Association finds scope in giving the soundest advice to intending partners or assistants—unless that which *Punch* gave to those about to marry is wisest of all. The various forms for agreements, etc., are excellent, and appear to cover any exigencies which may arise. In Part II., the Partnership Act of 1890 is given in full,

with very useful notes and precedents, which we believe are so dear to the legal mind; being followed by a long chapter on goodwill and restrictions to practice, an appendix of cases on restrictive covenants, and other chapters on introductions and assistants. Both the index and the table of cases referred to are very complete.

We can heartily recommend this book to intending partners, and to their solicitors; and we are sure that if the sound advice given in it is followed, we should hear less of the disappointment and disagreements that so often arise in medical partnerships. We hope every solicitor in the country will supply himself with a copy.

The Animal Tuberculoses, and their Relation to Human Tuberculosis. By ED. NOCARD. Translated by H. SCURFIELD, M.D. Pp. 143. London: Baillière, Tindall and Cox. 1895.—The great interest of this book lies in the demonstration of the importance of contagion and the insignificance of heredity in the propagation of bovine tubercle; and the translator observes that if the children of tuberculous parents were protected from infection by cohabitation or ingestion, the importance of heredity as a cause of the disease, or even of the predisposition to it, would dwindle away into insignificance.

Myxœdema and the Thyroid Gland. By JOHN D. GIMLETTE. Pp. vii., 128. London: J. & A. Churchill. 1895.—This is a thesis for the Medical Degree of the Lisbon Medical School amplified. It is essentially a compend of the various writings on Myxœdema, and, as the writer has been industrious in consulting his authorities and has made his book as complete a *resumé* as possible of the existing state of knowledge on the subject, it forms a useful compilation. He has brought it thoroughly up to date and gives the latest views as to treatment. There is a good index, a necessity in a work of this kind.

On the Relation of Diseases of the Spinal Cord to the Distribution and Lesions of the Spinal Blood Vessels. By R. T. WILLIAMSON, M.D. Pp. 43. London: H. K. Lewis. 1895.—In this we have a reprint, with some additions, of papers which were published in the *Medical Chronicle*. It is well written, is illustrated with numerous drawings, and forms a valuable contribution to a subject which has recently attracted much attention. The author brings forward many new facts and adduces the observations of other writers to show that the pathological changes in diseases of the spinal cord often bear a remarkable anatomical relation to the distribution of the spinal vessels; and further, that well-marked morbid changes in the vessels themselves are of frequent occurrence. We think that he successfully demonstrates that vascular lesions play a larger part in the production of spinal cord disease than has hitherto

been supposed. The book, besides containing much original observation, gives full references to the chief work on this subject by other observers and will repay careful perusal.

The Conditions of Radical Cure in Cancer [and other Papers]. By HERBERT SNOW, M.D. Pp. 63. London: J. & A. Churchill. 1895.—This small volume consists of reprints of four lectures on cancer by Dr. Snow. One third of the pages is taken up by short and incomplete reports of cases; of the remainder the major part is devoted to such banal themes as advocating early operation and excision of glands whether obviously diseased or not. There is an inadequate discussion of what the author calls "fibroma of adolescence," which he says is "largely due to direct pressure;" he also makes the statement that "something must also be ascribed to indirect pressure effects and to sympathy with the uterus, also struggling for unimpeded development"! How these remarkable causes bring about a "fibroma" of the breast, which disappears under inunction of a lead iodide ointment, is not explained. We cannot recommend any member of our profession to buy the book; but it is eminently fit for the railway book-stall.

Early Scoliosis or Curable Curvatures of the Spine. By PERCY G. LEWIS, M.D. Pp. 49. London: John Bale & Sons. 1895. — By this publication the author wishes to assist practitioners in the diagnosis and treatment of cases of lateral curvature when seen at an early stage, and we think it will well serve such a useful purpose. It is mainly clinical, but an outline of the pathological changes met with in these cases is also given, while practical directions as to treatment are added, rendering the work as complete as it can be in such a small compass. The author does not approve of mechanical supports and especially objects to the use of Sayre's jackets, but he recommends various gymnastic exercises (which are fully described and figured) and a special form of "spinal cushion," which he describes as a kind of vertical bolster fixed to the back of the chair on the side of the raised shoulder. He also recommends a "spinal chair," the back of which moves on a pivot, in such a way that either margin may be made to advance while the other recedes. We have no doubt that when properly used these appliances are valuable, but we entirely differ from the author when he signifies his disbelief in the use of massage combined with Swedish exercises. We would far rather trust to a combination of these than to "the author's spinal cushion" or "the author's spinal chair."

Some Points in the Practice of Lithotrity or Litholapaxy. By REGINALD HARRISON. Pp. 16. London: John Bale & Sons. 1895.—We have here a lecture delivered at a post-graduate course, which contains some excellent hints as to the successful management of this operation. It may be read with advantage by all who wish to do the operation.

A Handbook of the Diseases of the Eye and their Treatment. By HENRY R. SWANZY, M.B. Fifth Edition. Pp. xviii., 582. London: H. K. Lewis. 1895.—This well-known work maintains its reputation amongst the very best guides to a knowledge of diseases of the eye. Dr. Louis Werner has been associated with the author in editing this last edition, which has been enlarged and to some extent re-arranged. The book has been kept well up to date, and in making reference to it for any new or abstruse point in ophthalmic practice which is of real practical value one is seldom disappointed. Among other chapters of great excellence may be mentioned that on "Amblyopia and Amaurosis due to Central and other Causes," in which the various defects of vision that depend upon impairment of the various tracts and centres of the nervous system are fully and ably discussed. This is a subject of interest to the physician as well as to the ophthalmic surgeon. All parts of the book are well and concisely written.

Medical Electricity. By H. LEWIS JONES, M.D. Being the Second Edition of *Medical Electricity*, by W. E. Steavenson, M.D., and H. Lewis Jones, M.D. Pp. xiii., 474. London: H. K. Lewis. 1895.—We are glad to see that this excellent manual has reached a second edition. It is to be thoroughly recommended, as it gives just the information most useful to the medical practitioner to enable him to apply electricity to his cases, to select the cases in which this treatment will be beneficial, and that form of it which will give the best results. The book is a thoroughly practical one, and from it a good working knowledge of medical electricity may be gained. This edition retains the main features of the first, but the earlier chapters have been simplified in order to make them more generally useful.

Manual for the Church Lads' Brigade Medical Staff Corps. Pp. 71. London: The Church Lads' Brigade. 1895.—This is an accurate and fairly complete little manual, giving instruction in first aid to the wounded. The directions are clear and sufficiently full, since they are intended to be supplemented by oral instruction, but more definite warning should, we think, be given against allowing patients with fractures of the lower limb to attempt to stand, on the care of varicose veins, and against giving stimulants to epileptic patients. A large portion of the little book is taken up with directions for stretcher drill and the precautions to be observed in carrying the wounded. The manual has been compiled with much care so far as it goes.

Hygiene and Public Health. By LOUIS C. PARKES, M.D. Fourth Edition. Pp. 531. London: H. K. Lewis. 1895.—This excellent students' manual retains its place as a concise and useful text-book of Public Health. In the fourth edition some slight additions are made and the information is brought up to date.

Bread, Bakehouses, and Bacteria. By F. J. WALDO, M.D. and DAVID WALSH, M.B. Pp. 65. London: Baillière, Tindall and Cox. 1895.—This collection of papers deals with the necessity for the proper regulation of bakehouses, having regard not only to the interests of the consumer but also of the workman. While the authors appear to attach somewhat undue importance to their bacteriological investigations, and, as in Chap. IV. (Cholera in Bread), seem to strain somewhat for effect, the general practical conclusions of the papers are unassailable.

The Truth about Vaccination. By ERNEST HART, D.C.L. Second Edition. Pp. iv., 59. London: Smith, Elder & Co. 1895.—The case for vaccination is here fairly and concisely stated. There is very great advantage in having for reference a book wherein, without excessive labour, the answers to the chief anti-vaccination arguments may be found; and every practitioner would do well to obtain and study a copy of this work.

A Summary of the Vital Statistics of the New England States for the Year 1892. Pp. 59. Boston: Damrell & Upham. London: P. S. King & Son. [1895.]—The neglect of registration in the State of Maine rendered impossible any previous attempt at classification of the statistics of the New England States as a whole. This summary is carefully and clearly compiled, and forms an excellent beginning of systematic vital statistics for the New England States.

The Johns Hopkins Hospital Reports, Vol. IV., No. 7—8. *Report in Gynecology*, III. Baltimore: The Johns Hopkins Press. 1895.—This report contains articles on hydrosalpinx, post-operative septic peritonitis and tuberculosis of the endometrium. More than half the book is taken up by the first of these subjects, which is classified under the heads of (1) hydrosalpinx simplex; (2) hydrops tubæ profluens; (3) hydrosalpinx follicularis; (4) tubo-ovarian cyst. It will be seen that this is an ordinary classification with the addition of hydrosalpinx follicularis, which is a new variety. Briefly it may be said that this last does not differ externally from hydrosalpinx simplex, but on section it presents a honeycombed appearance, and may or may not show a central lumen. In fact it resembles a cystic form of endo-salpingitis follicularis described by Martin and Orth. Short histories of twenty-seven cases of hydrosalpinx are given. The second part of the work was inspired by four deaths from abdominal section occurring about the same time, and apparently due to the use of an infected gut. Tuberculosis of the endometrium is thought to be generally due to extension from the tubes, and some observers have thought that removal of the appendages with curetting of the uterus is sufficient in these cases. Dr. T. S. Cullen, the writer of the report, however, advises removal of a portion of the uterus too in cases where tuberculous tubes are found; for the disease is

generally limited to the upper part of the uterine body, which is not easily reached by the curette. The work is illustrated to show the various points in the pathology of the above conditions; several of the pictures are coloured, and all are highly finished. The printing is clear and very free from typographical errors.

Edinburgh Hospital Reports. Volume Third. Edinburgh: Young J. Pentland. 1895.—This volume fully maintains the reputation gained by the two previous ones as being amongst the very best of the hospital reports published. It contains a number of interesting papers of much scientific value on clinical subjects, or on matters closely connected with clinical observation. Without selecting especial papers, we may say that every medical man who reads these reports will find much to interest and instruct him. The illustrations are numerous and good, and the printing and appearance of the book do credit to the publisher.

Transactions of the New York Academy of Medicine. Second Series. Vol. X. for 1893. Printed for the Academy. 1894.—This volume gives good evidence of the vigorous life of the profession in New York, in spite of the death of one of its most distinguished ornaments, Dr. James R. Leaming, whose memorial address by Dr. J. Leonard Corning contains the following concluding passages:—"To me he seemed like an exceptional and beautiful creation—as are all great and good men, to remind us of the immeasurable possibilities of human nature. Such attributes of the spirit cannot die; for though the physical casket in which they were enshrined for a season may pass away, their essence shall remain forever in our hearts as a glowing memory." The paper by Murphy on "Intestinal Approximation" may especially be mentioned as one of the most advanced of the series.

Proceedings of the West London Medico-Chirurgical Society. Volume the Sixth. London: Baillière, Tindall and Cox. 1895.—This volume comprises the proceedings of the eleventh and twelfth sessions, 1892-93 and 1893-94, and the Cavendish lectures by Mr. Henry Morris and Sir William Broadbent, the latter on the treatment of typhoid fever, which subject is also dealt with in an interesting address by Dr. Donald W. C. Hood. It is a matter for congratulation that the book is probably the last of this series of tardily-appearing volumes, which, we presume, will be superseded by the Society's quarterly periodical, noticed on another page.

Transactions of the Obstetrical Society of London. Vol. XXXVI. London: Longmans, Green, and Co. 1895.—This volume contains a number of interesting papers, and will be found well worth perusal by all who are interested in obstetric work. In a paper on "Cases of Pregnancy and Labour with

Bright's Disease," Dr. Herman makes some important observations and deductions, amongst other things showing that the prognosis is worse in those cases in which the average daily excretion of urea falls much below 250 grains than in those in which it is higher; a rapid rise in the average amount of urea excreted daily after delivery is a favourable sign, as is also a marked increase in the quantity of urine. Dr. Harris, in "A Plea for the Practice of Symphysiotomy," gives an interesting series of cases, but fails to carry conviction to the minds of those who heard the paper: there is little doubt but that the objections to the operation in English practice are many, and that it is unlikely to have a wide application as a substitute for either craniotomy or Cæsarean section. Dr. Gow, in a paper on the "Relation of Heart Disease to Menstruation," appears to confute the opinion often expressed as to the prevalence of menorrhagia in valvular disease. Dr. Amand Routh, writing on "Associated Parovarian and Vaginal Cysts," throws considerable light on some rather obscure cases where tumours apparently parovarian in nature suddenly disappear, often with the occurrence of a profuse watery vaginal discharge. He attributes these cases to the emptying of the tumour through a persistent duct of Gartner. Dr. Giles makes some interesting observations on the relation between temperature after delivery and the duration of labour. Dr. Griffith cites a case which shows that the expulsion of a decidual cast cannot be considered good evidence of the existence of extra-uterine pregnancy. Many noteworthy specimens are described in detail, and much interesting matter will be found in the volume in addition to that mentioned. The general get up of the volume is as good as usual, and the printing of several charts, showing in graphic form the main points of interest, makes the papers very easy of digestion.

The Transactions of the Edinburgh Obstetrical Society. Vol. XIX. Edinburgh: Oliver and Boyd. 1894.—As the ground covered by these *Transactions* is large and the contributors are numerous, we cannot well discuss the many articles in detail. In a valedictory address by Professor A. R. Simpson we are reminded of the long-fought battle—concluded some thirty years ago—which was waged with such bitterness before the operation of ovariotomy was allowed a place in surgery; and Dr. Clay, the "father of ovariotomy" in England, is duly eulogised. Those interested in teratology will be pleased to see a continuation of Dr. Ballantyne's able articles on this subject, and here he treats of the anatomy of the different forms of the "amorphous" fœtus. We may here express our regret that Dr. Ballantyne's useful periodical *Teratologia* has not met with sufficient support to justify its continuance. We do not observe anything "new" in the various papers, but they are marked by a sound practical character, which is perhaps their chief feature, and which shows that the Society is well abreast of the times.

There is a useful index, and the printing of the book has been well done.

Transactions of the American Dermatological Association. New York: Geo. L. Goodman & Co. 1894.—We have read this volume with great pleasure, as it deals with very interesting and very rare matter. It is well got up, well printed, and well illustrated with drawings, photographs, and coloured plates. The first contribution is by Dr. G. T. Jackson on "Thyroid Feeding in Diseases of the Skin," and the conclusions arrived at by the author himself, and the members who entered into the discussion, are, generally speaking, these: That there is danger to the patient's life in giving any preparation of the thyroid gland, and that therefore the administration must be very carefully watched, and that in most cases of skin disease the good that has appeared might well be attributed to rest in bed and hospital attention, but that in most cases of myxœdema and cretinism the results are so good that the risk of dangers to the sufferers from these dire disorders may, justifiably, be run. "Cold as an Etiological Factor in Diseases of the Skin," by Dr. Wm. Thos. Corlett, of Cleveland, is a record of fourteen cases of an eruption, chiefly on the hands and forearms, caused by severe cold, and therefore occurring mostly in the winter, and hence named dermatitis hiemalis. The paper is illustrated by a very well-drawn and coloured plate, and by smaller photographs. We must not omit to call attention to Dr. G. H. Fox's communication on "The Rare Forms of Alopecia," which gave rise to very conflicting views; and to "A Case of Favus of the Head and Body," recorded by Drs. J. Abbott Cantrell and Emanuel Stout. Dr. H. W. Stelwagon, dealing with "The Question of Contagiousness of Molluscum Contagiosum," quotes more cases than any other collector whom we can remember. Dr. S. Sherwell describes a very remarkable case of "Icthyosis Congenita (so-called Harlequin Fœtus)." Dr. Edward B. Bronson's case of "Symmetrical Cutaneous Atrophy of the Extremities" is probably unique.

Transactions of the Medical Society of the State of New York. Philadelphia: William J. Dornan. 1895.—**Transactions of the Michigan State Medical Society.** Vol. xix. Grand Rapids: Seymour & Muir Printing Co. 1895.—**Transactions of the Medical Society of New Jersey.** Newark: L. J. Hardham. 1895.—**Transactions of the Iowa State Medical Society.** Vol. xiii. Des Moines: The Kenyon Printing and Mfg. Co. 1895.—**Transactions of the Medical Association of the State of Alabama.** Montgomery: Brown Printing Co. 1895.—**Transactions of the Ohio State Medical Society.** Toledo: The Blade Printing and Paper Co. 1895.—**Transactions of the Texas State Medical Association.** Galveston: Knapp Brothers. 1895.—These volumes contain many papers of more than ephemeral interest to the members of the respective associations; they indicate a

degree of healthy medical vitality extended over a wide area of the United States, and give much information of world wide interest interspersed with much which can only be of interest locally and individually. One of the most useful and practical papers is that by Dr. Benedict, of Buffalo, on auscultatory percussion and allied methods of physical diagnosis (*Tr. M. Soc. N.Y.*, p. 351). He endeavours to locate the boundaries of an organ by noting when the sound of percussion becomes suddenly feeble, as heard through the stethoscope. So long as both plexor and stethoscope are over the same organ the sound conveyed to the ear is peculiarly sharp and penetrating: as soon as either passes the limits of the organ the sound becomes dull and diffused. The finger or a tuning-fork are the most convenient methods of instituting vibrations.

Annual of the Universal Medical Sciences. Five Volumes. Philadelphia: The F. A. Davis Company. London: F. J. Rebman. 1895.—The eighth issue of this *Annual* has arrived somewhat tardily towards the end of the year: it is difficult to keep a large editorial staff up to time, but the Editor speaks kindly of those who are responsible for the delay. We can only congratulate him on the result of his work, and wish that it may be long continued.

The Year-Book of Treatment for 1896. London: Cassell and Company, Limited.—This now well-known and always welcome annual has appeared somewhat earlier than usual, a fact which is greatly to the credit of the editor and the enterprising publishers, inasmuch as it has not been suffered to deteriorate, but worthily maintains the reputation of its predecessors. While, as always, it is a very useful volume for the busy practitioner, its sections vary considerably in scope and completeness; for instance, it is surprising, and we think a misfortune, that no allusion is made to the extremely important recent contributions on malignant disease of the larynx, which have entirely altered our position in regard to the radical treatment of a considerable proportion of these hitherto hopeless cases. It would be easy to add other examples of serious omission, while the insertion of less important matter, though doubtless useful and interesting, prevents our ascribing all these defects to the exigencies of space. Yet, with these few exceptions, the *Year-book* may be said to be a fairly complete and able *resumé* of the past year's therapeutical advance, and one that should be in the hands of every practitioner.

Clinical Sketches. London: Smith, Elder, & Co. 1895.—We congratulate Mr. Noble Smith on the result of his first year's editorial work, and on the fact that he will in future be able to continue a new series of this periodical at half the previous price. The December number of this journal concludes a series forming a very handsome volume of sketches, both artistic and literary. It contains a copy of the well-known

portrait of John Hunter, painted by Sir Joshua Reynolds and engraved by Sharpe.

The West London Medical Journal. Published quarterly under the auspices of the West London Medico-Chirurgical Society. Vol. I., No. 1. January, 1896. London: John Bale & Sons.—We cannot but congratulate the promoters of this new quarterly on the appearance and dress of their *Journal*, which so much resembles our own. We quite think that a journal of this kind must add to the prosperity of the Society which undertakes it, and we wish both the *Journal* and the Society a useful and protracted life—with a continuance of the healthy vitality given to its first number by Dr. Symons Eccles on the advantages of oxidation.

Pediatrics. Vol. I. No. 1. January 1st, 1896. New York: Van Publishing Co.—This periodical, devoted to the diseases of children, is to be published semi-monthly. An editorial staff, composed of British and United States doctors, has been obtained. We congratulate the editor, Dr. George Carpenter, on his first number, which is not only full of good material but is well and artistically printed. We wish prosperity for the new journal, which seems to be an American publication with an English editor.

Journal de Neurologie & d' Hypnologie. Brussels: 3 Rue des Hirondelles.—This journal, the first number of which was issued in December, is to appear twice monthly. It is intended not only for neurologists, but to enable medical practitioners generally to keep themselves in touch with the advances made in neurology. Besides original articles, the journal will contain a general review on some subject of current interest in neurology or hypnotism, and short abstracts of cognate subjects. The names of the collaborators are a sufficient guarantee that the journal will be well written. The early numbers contain some interesting papers. We would suggest that the titles of the abstracts of foreign papers should not be translated into French, but given in the language in which they were written in order to facilitate reference to the original papers. If thought necessary, a translation of the title could be added.

A.B.C. Medical Diary. 1896. **A.B.C. Chemist's Vest-Pocket Diary.** 1896. London: Burroughs, Wellcome & Co.—We need only mention the titles of these products of "the firm that did." The *Medical Diary* is bound up with 180 pages of valuable information called the "Excerpta Therapeutica," the diary itself is of the ordinary weekly type. They both contain abstracts of the history of sero-therapeutics, therapeutic notes on the newer remedies, and a large number of useful tables for reference.

The Professional Nurses' Diary and Ready Reference Book. 1896. London: Burroughs, Wellcome & Co.—This is an exceedingly useful manual, consisting of 114 pages of serviceable

diary matter prefaced by 78 pages of well-planned and well-written introduction, which deals amongst others with such subjects as "Nursing: Ancient and Modern," "General Principles of Nursing," "First Aid in Emergencies," "Foods and Feeding." If, as was to be expected, the preparations of the firm publishing this book are brought specially into notice, the value of the book is not thereby diminished, as most, if not all, of their preparations have stood the test of experience. Every nurse would be the better for adding the little work to her equipment.

The English Illustrated Magazine. London: *Illustrated London News* Office.—The March number is excellent. Amongst its articles is an interesting and well-illustrated one on "The New Light," dealing with Professor Röntgen's recent discovery. Doctors will also read with interest some "Minor Memories of Lord Leighton," of whom it is said that "the son and grandson of physicians, he found in anatomy a study which he described as 'fascinating.'"

Notes on Preparations for the Sick.

Ingluvin; Bromo-soda; Aloin Parvules; Lithia Tablets; Pil. Peristaltic; Pil. Cascara Cathartic; Pil. Chalybeate Comp.—Wm. R. Warner & Co., Philadelphia.—Samples of these have been sent to us by Messrs. F. Newbery & Son. They are all excellent preparations, and are for the most part too well known to need description. The **Parvules** are supplied in cases with forty varieties; they are quickly dissolved; and the dose is small, in order that it may be given at short intervals. The **Lithia Tablets** are for making an effervescing dose of fresh lithia water. The **Pills** are perfect.

Thyroid Powder Palatinoids.—Oppenheimer, Son & Co., Ltd., London.—The palatinoid appears to especially adapt itself to the administration of an animal extract. The **Thyroid Powder**, being hermetically sealed in a jujube covering, is not so prone to decomposition as when supplied in dry powder or pellet. Each palatinoid contains five grains of the fresh gland.

Tabloids: Alkaline and Antiseptic (Dr. Carl Seiler's formula).—Burroughs, Wellcome & Co., London.—These tabloids may be dissolved in water, and a solution is at once ready for nasal irrigation or for gargling the throat. They are composed of sodium bicarbonate, benzoate, biborate and salicylate, with thymol, menthol, and ol. Gaultheriæ. We have not been in the

habit of using such an elaborate combination as this; but it is obvious that the tabloids should be of much service in cases where an alkaline antiseptic is indicated.

Liq. Quininæ Salicylatis; Pastils.—COOPER & Co., London.—Each fluid drachm of the **Liquor** contains one grain of natural salicylate of quinine. It forms a clear and elegant solution, which when diluted with water becomes opalescent and tastes much like orange bitters. Its uses are obvious.

Messrs. Cooper & Co. have sent us several preparations made with Iceland Moss Jujube as a basis, and to which they have given the name of **Pastils.** They are firm and palatable, and contain such drugs as phenacetin (gr. v.), sulphonal (gr. v.), bismuth (gr. iii.), red gum (gr. j.), and the usual components of throat and cough lozenges.

Mist. Damianæ Co.—C. J. HEWLETT & SON, London.—This mixture is worthy of the appellation "an elegant preparation." It contains fluid extract of damiana in conjunction with nux vomica and bitter aromatics, and is especially intended for cases of nervous exhaustion, chronic alcoholism, &c. This kind of drug is open to great abuse, but nevertheless it has a legitimate range of utility, and will often be of some service in cases of functional nerve diseases, as also in the early stages of organic diseases of the brain and spinal cord.

Terrōl.—THE TERRŌL Co., London.—This is described as a tastleless substitute for cod liver oil, to which it is said to be superior, being tasteless and inodorous, digestible and non-nauseating. "It has also the advantage of antiseptic properties, rendering it of great value for the cure and prevention of many diseases of bacterial origin." We question if these statements will survive criticism. It may be a substitute for cod liver oil from the mere mechanical point of view of lubrication, but the difficulty of absorption of petroleum must render it of no value as a food. It may give mechanical relief in cases of bronchial catarrh, and it may possibly assist the processes of gastric and intestinal digestion, but its negative properties of taste and smell will not compensate for the absence of all the other properties of cod liver oil.

Grape Jelly.—THE VIKING FOOD AND ESSENCE Co., London.—This is prepared solely with pure grape juice evaporated *in vacuo*, and is specially recommended as "a substitute for grapes to those who are unable to undergo the grape-cure treatment abroad." We wonder, on reading this, whether the inspection of a few photographs of Alpine snow-peaks may have the same invigorating effect as climbing them. The grape cure is doubtless useful, especially when the patients eat eight or ten pounds

a day in place of an ordinary diet; but surely the grapes are only one adjunct to the programme of the grape cure. Is not this jelly a feeble caricature of treatment? As an ordinary dietetic jelly it is good, both in appearance and flavour; but we must decline to place it in our *armamentarium* for the treatment of disease.

Peptenzyme.—REED & CARNRICK, New York.—This new digestive presents in "functional physiological activity all the digestive agents of the animal economy: stomach, pancreas, spleen, salivary and Brunner's glands, and Lieberkuhn's follicles, and—free nuclein—the tissue builder of the organism."

These elegant tabloids, containing five grains each of this omnipotent powder, ought to abolish dyspepsia from our bodies and dyspeptics from our consulting rooms. We are not quite clear as to the correctness of the physiology which underlies its composition, or as to the magical virtues which are just now being associated with the name Nuclein.

Coca Wine Essence.—BUXTON & Co., Clifton.—This special preparation of Coca leaves is miscible in any proportion with wine, milk, or water; and one drachm represents the full medicinal value of one drachm of the finest green Nuxillo Coca leaves. We cannot describe the fluid as pleasant to the palate; but it has a strong odour and taste of the well-known coca leaf, of the properties of which it must partake.

Bovril for Invalids; Bovril Beef Jelly; Bovril Chocolate; Small Bovril Tablets.—BOVRIL LIMITED, London.—Some of these excellent preparations of the company presided over by Lord Playfair are thoroughly well known and appreciated; others deserve to be better known than they are. "Albumen and fibrine are the *desiderata* in these preparations. They cannot properly be restored to meat extracts or beef tea except by the process of comminuting the lean meat until it resembles very fine flour, and adding this to a special blend of meat extract. Without albumen and fibrine, beef tea is a mere stimulant; with albumen and fibrine, the essentials are provided, and this combination of the stimulative with the nutritive constituents of beef—of extract of meat with albumen and fibrine—is perfectly accomplished in Invalid Bovril, giving a perfect food in a form easy of digestion and assimilation. We may say that the difference between Invalid Bovril and ordinary Bovril lies in the former being more concentrated, and containing less seasoning; apart from that, the method of preparation is exactly the same."

We have found that a solution of the **Invalid Bovril** in warm water gives an abundant precipitate of albumen on boiling, and also with picric acid: a solution of average strength, as ordinarily

taken for food, showed the presence of one gramme per litre of albumen as estimated in the picric acid tube. Microscopically, the sediment was found to consist of granular *débris* of muscular tissue, many of the fragments showing the well-marked striations of healthy muscular fibres. The **Jelly**, mounted in glass bottles, has an excellent appearance and flavour. It is extracted by gentle heat, has no added water, and is not contaminated by contact with metals. It is a very useful and convenient preparation to keep by the bedside at night, and when stimulating concentrated nourishment is needful. It makes excellent beef tea, and will be relished by the most prejudiced critic. The **Bovril Chocolate** differs little in flavour from the ordinary kind; but the tablets must contain more actual nourishment in proportion to the amount of Bovril they contain—of this we could find no mention. The **Small Tablets** are very convenient. Each contains sufficient Bovril to make a teacupful of the ordinary beef tea. A box of these carried in the pocket might be very useful in emergencies.

Marza Wine.—THE MARZA COMPANY, LTD., London.—This combination of port wine with iron, phosphorus, coca, and pepsine, must have a somewhat complicated chemical composition, which will scarcely be a guide to its therapeutic activity. It is an agreeable beverage, and as a medicine is infinitely more pleasant than most medicinal fluids. Its specific gravity is over 1030, it mixes readily with water, and does not precipitate with picric acid. Its ingredients are a sufficient indication of what its dietetic and medicinal virtues are likely to be.

Soda Water; Potash Water; Lithia Water; Brighton Seltzer Water; Lemonade; Ginger Ale; Orange Champagne.—IDRIS AND CO., LTD., London.—We have much pleasure in calling attention to these productions, samples of which we have received. They are of excellent quality. Each pint of the **Soda Water** contains four grains of the bicarbonate. The **Potash Water** is of the British Pharmacopœia strength. The **Lithia Water** has five grains to the half-pint. The **Orange Champagne** is a particularly pleasant drink.

Purest Chloroform.—SALAMON & CO., LTD., Rainham.—This is an excellent specimen of chloroform, which we have used as an anæsthetic and found to be quite unirritating.

Compressed Ophthalmic Discs.—JOHN WYETH AND BROTHER, London.—In these we have a well-selected series of small tabloids and gelatine discs, which contain in proper dosage the various medicaments generally used in ophthalmic practice.

Tannopumilene; Rose Bloom; Tongue Cloths.—ARTHUR AND Co., London.—**Tannopumilene** is intended for unhealthy or excessive perspiration, and is useful for perspiration of the feet. **Rose Bloom** is a mixture of soluble reds made to match the tint of the skin, and is intended, we presume, for painting ladies' faces: it is said to be quite harmless; but, although we are assured by the makers that samples of it were accepted with avidity by members of the medical profession at this year's museum in London, yet we are not disposed to recommend it. **Tongue Cloths** have been prepared at the suggestion of a laryngologist, and will serve a useful purpose.

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

December 11th, 1895.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

Dr. F. H. EDGEWORTH showed a case of paralysis of the left external popliteal nerve in a middle-aged man, causing total paralysis of movement, with wasting and degenerative reaction, in the muscles innervated, and a partial anæsthesia of the skin area supplied. It was held that the interruption in the conductivity of the nerve fibres was probably due to a neuritis, analogous in etiology and pathology to that which takes place in peripheral facial paralysis.

Dr. A. B. PROWSE showed specimens from a case of acute nephritis in a girl, aged 13. The attack, fatal at the end of the second week, followed a "chill;" and there was no history of scarlatina, or other preceding febrile condition. The œdema was at first excessive, but diminished considerably after treatment with jaborandi, digitalis, and hot-air baths. The urine quickly increased from 15 to 46 ounces *per diem*, but contained from .6 per cent. to 3 per cent. of albumen. During the last five days of life the motions were very watery and frequent. Two days before death the œdema of the legs increased so much that punctures were necessary to relieve the painful distension of the skin. The pulse failed very markedly about twelve hours before death, which occurred suddenly, after temporary improvement. At the necropsy the kidneys proved to be most typical specimens of the early large-white stage. The inferior vena cava was filled by a thrombus with a small central channel, and there were similar thrombi in all the large branches of the pulmonary artery. The vessels in the kidneys, also, were plugged more or less completely by decolorised clot.

Dr. WATSON WILLIAMS read a paper on the "Symptoms and Diagnosis of Malignant Disease of the Larynx," referring especially to the slighter and less recognised early manifestations of malignant disease in this region. The great importance of early diagnosis of intrinsic laryngeal cancer lay in the fact that Semon's results proved that these cases occurring in patients in otherwise fair health, had a chance

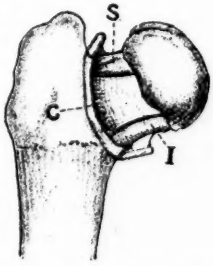
of 60 per cent. in favour of successfully undergoing radical surgical treatment, and of 50 per cent. of permanent relief from their disease, with a more or less useful voice. Thus the diagnosis of intrinsic cancer of the larynx was no longer always "a sentence of death," yet only too often cases became hopeless from failure to recognise the "danger signals" in laryngeal disease, so that the patient might come under the notice of an expert. The symptoms varied of course with the location of the new growth, but hoarseness was the commonest early symptom, not pain; pain, in fact, being often late in onset, or absent to the end. Glandular infiltration, too, was often insignificant or absent in early cases. Objectively, too, the early appearances were very deceptive. Cancer of the vocal cords might commence as a diffuse infiltration, with uneven surface, or merely as a congestion. In other cases a warty growth appeared, or a fringe-like outgrowth. Especially in the ventricular bands and aryteno-epiglottic folds, malignant growths were apt to commence as a diffuse infiltration, while epiglottic growths were more greyish-white in aspect. Hoarseness coming on in patients past middle life, and without obvious cause or general symptoms pointing to phthisis, syphilis, or gout, especially if associated with congestion of one cord or ventricular band, and particularly when the vocal cord movements were impaired, a symptom on which Semon laid much stress, was to be viewed with suspicion and carefully watched; the diagnosis having to be made from inflammatory disease, laryngeal paralysis, syphilis, tuberculosis, lupus, gout, pachydermia laryngis, benign growths, and perichondritis. Too much weight should not be attached to negative results of histological investigations of portions of growth removed, especially when clinical evidence pointed to malignancy; for a growth may present a papillomatous and benign surface with a malignant base.

Dr. MARKHAM SKERRITT showed a specimen of diffuse cancer of the stomach, in which practically the whole of the organ was infiltrated with the new growth, the thickness of its wall having an average of about an inch. The naked-eye appearance was typically that of colloid cancer. The case was of clinical interest chiefly on account of the resemblance which the growth in the stomach and adjacent parts had to a cancerous liver. The patient was a woman, aged 29, with a history of constitutional syphilis.—Dr. THEODORE FISHER referred to the fact that although the growth was diffused through the stomach, very little contraction had taken place. As to the differentiation of such a growth from one in the pancreas or great omentum, he mentioned a case of diffuse carcinoma of the stomach that had come under his observation, in which he made a correct diagnosis from the fact that the mass hardened under palpation, showing it to contain muscular tissue.

Dr. MICHELL CLARKE showed a specimen of a varicose aneurysm of the ascending aorta opening into the vena cava below the azygos vein by an aperture the size of a shilling. The right innominate vein was closed by a thrombus. The patient was an agricultural labourer, aged 53, who had enjoyed good health except for an attack of bronchitis the previous winter. Symptoms of intense dyspnœa, cyanosis, and swelling of the right upper extremity and of the face came on suddenly a month previous to observation. A loud musical double murmur was present at the base of the heart, which at times was continuous through systole and diastole.—Professor FAWCETT called attention to the existence of a well-marked moderator band which connected the anterior musculus papillaris of the *left* ventricle with the septal wall. This band had evidently arisen by the dilatation of the ventricle pulling out an original trabecula carneæ which had in

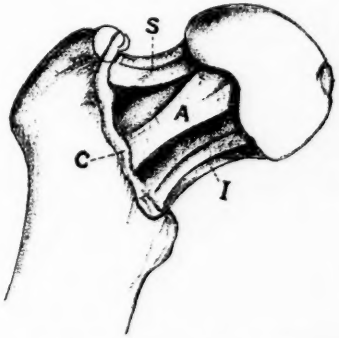
the pre-pathological state connected this anterior musculus papillaris with the septal wall. So attenuated had it become that it was, save for the part where it was connected with the base of the musculus papillaris, entirely tendinous.

Professor FAWCETT gave a demonstration of the Retinacula of Weitbrecht, on which a paper by him was published in the *Journal of Anatomy and Physiology* for October, 1895. The neck of the femur is naturally a weak spot, because it is set on to the shaft at an angle and because it has to bear the weight of the body above it. During adult life it is strong enough for all emergencies, but in childhood and in old age the circumstances are very different. During childhood the head of the femur is united with the neck by a plate of cartilage, which is necessarily a source of weakness. In old age the cancellous and compact tissues of the neck of the femur become thinner and cause the neck to be consequently weaker. It is at these periods of life that the additional support afforded by these retinacula is most required. It is unlikely (1) that the periosteum surrounding the neck of the femur would be thickened along definite and constant lines if there were no cause for such thickening, or (2) that these bands exist for the mere purpose of anatomical demonstration or for the purpose of repair of fracture. As in the child the body-weight falls vertically over the head of the femur, we should expect to find two bands to prevent the head being displaced downwards, and we should not expect to find an anterior band because there would be nothing for it to do. An examination of the neck of a child's femur shows that such expectations are entirely realised. There are two bands, and two only, and they are in the positions we expect them to be—namely, above and



Anterior view of neck of right Femur at birth.

Capsule cut away to line of attachment to Femur, Retinacula of Weitbrecht exposed. **C.** Capsular Ligament. **S.** Superior Retinaculum of Weitbrecht. **I.** Inferior Retinaculum of Weitbrecht.



Right Femur seen from front.

C. Capsular Ligament of Hip Joint laid open and cut along line of attachment to Femur, shewing along the neck of the Femur; **S.** The Superior Retinaculum of Weitbrecht; **A.** The Anterior Retinaculum of Weitbrecht; **I.** The Inferior Retinaculum of Weitbrecht.

below. These upper and lower bands are evidently there by heredity —there to be ready to meet the strain they will soon be called upon to bear, there to prevent the head being torn from the neck of the femur,

—two of them only, because they have to meet at first with a vertical strain. But when once the erect condition is naturally attained, and the concomitant eversion of the limb bringing about the forward direction of the head and neck of the femur is established, the anterior part of the capsular ligament of the hip-joint and the psoas magnus having in the meantime, through repeated efforts at attainment and maintenance of the erect position, become lengthened out, a new strain is brought to bear on the epiphyseo-diaphyseal joint between the head and neck of the femur—a strain which is directed downwards and forwards from above and behind, and this strain has to be met by another band. That band is the middle or anterior retinaculum of Weitbrecht as we see it in the youth and adult. We may take it, then, that the retinacula of Weitbrecht are the strengthening fibres of the capsular ligament (cervical ligament of Stanley) of the joint between the head and neck of the femur, and that they are called forth by strains exerted in certain directions, and they limit excessive demands of those strains, preserving, by doing so, the integrity of the region involved; that the cervical ligament of Stanley being periosteum, fulfils the ordinary functions of periosteum—viz., those of repair and of nutrition; that the true function of the retinacula is prevention, not cure.

January 8th, 1896.

Mr. ARTHUR W. PRICHARD, President, in the Chair.

Mr. JOHN DACRE read a paper as the introduction to a discussion on "The Use of Alcohol from a Medical Standpoint." (*See* page 10.)

Dr. LONG FOX said that Sir Benjamin Richardson's experiments by hypodermic injection of alcohol showed that locally it acts as a neuro-paralytic. Taken internally, it removes in great measure the controlling influence of the smaller arteries on the heart, and causes also paresis of the vagus. The result is increase in number of cardiac beats, dilatation of surface-vessels, a feeling of surface-warmth, with reduction of the temperature of the body. It can scarcely be considered a food, as in itself it contains no one of the constituents of which the body is made. It gives no warmth to the body. This is proved by the thermometer. The disuse of it by deer-stalkers, by Canadian hunters, by Arctic explorers was additional proof of this. It gives no strength. It distinctly weakens the muscles. Professor Parkes realized this by experiment in the last Ashanti War. Acting on the same views, the Great Western Railway, during the alteration of rails along the whole line, substituted oatmeal gruel for alcohol, because the work had to be done with rapidity and with unusual energy. The relief of Chitral tells the same story, and so do our great national games. It does not lengthen life. To quote from the *Times*: "The United Kingdom Temperance and General Provident Society has two sections of insurers: one abstainers, the other alcohol users. An experience over 29 years shows that in the teetotal section, while 6187 deaths were expected, only 4368 took place; but in the section of alcohol users 8836 deaths were expected, and so large a number as 8017 actually took place. The Sceptre Life Assurance Society, the Scottish Temperance Life Assurance Company, and the Rechabites, all shew similar differences between these two classes of picked lives. The very lowest estimation of longer life is nine years on the teetotal insurers over those who are moderate drinkers." In many trades alcohol interferes with steadiness of hand, accuracy, and skill, and that where alcohol is taken in great moderation. Kraepelin's experi-

ments shew that alcohol renders a longer time necessary for simple reaction, discrimination and selection with reference to his test by coloured discs. It blunts the judgment in testing weight: and even small doses apparently blunt in some persons the keenness of vision and the refined sense of hearing. It has been tersely stated that, compared with total abstinence, the moderate use of alcohol means for the generality of mankind shorter life, less work, worse work. Advice therefore given by the medical profession against the use of alcohol would be the highest kind of preventive medicine. Speaking generally, is there any one disease of the nervous system in which alcohol is advantageous? Dr. Fox gave it up in the treatment of *delirium tremens* 35 years ago, and with decided benefit to such cases. Judging from published accounts, success in the treatment of insanity is in direct ratio with the discontinuance of alcohol in any form. Is it useful in pneumonia or in fever? In both cases it is given with the idea of preserving life until defervescence occurs. It is probable that in all cases, especially in the young, the assistance given to the heart by the digitalis series is far more valuable than that by alcohol. Cases occur in which a few hours are of the greatest consequence: and it may be that the relief of a failing heart, even at the expense of partially paralysed arterioles, may occasionally help a patient over an important epoch. But such cases are exceptional. In old people, with diseased vessels and feeble digestion, a small quantity of alcohol may by dilating the arterioles of the stomach, induce a somewhat less feeble power of digestion; but if so, the effect would be a transient one. But for diseases of mucous surfaces, for all morbid affections of the liver, kidneys, or spleen, for every affection of the nervous centres and the nerves themselves, for tubercle and cancer with their neighbouring arterioles already diseased, as well as in the inroads of other micro-organisms as diphtheria *et hoc genus omne*, and for all morbid affections of the vascular system, the effect of alcohol as a medicine—that is, in moderate doses—is to increase the paralytic action, that is more or less a prominent feature in all morbid conditions. And it is poor physiology in the present day to advise its use to nursing mothers, with the view of increasing the secretion of milk.

Dr. A. J. Harrison said that the term "use" of alcohol is a very important one. In some cases—and crises of cases—alcohol is one of the most important therapeutic agents we possess, and is often so paramount as to excel all other modes of treatment. He was old enough to remember when to recommend alcohol to young children would bring upon one the censure of reprobation. Yet, at the same time, a few cases of excitable children were related, shewing great benefit from the exhibition of small doses—sleep and greater mental steadiness being produced. Delirium in pneumonia and fevers especially are indications for stimulants, and their exhibition is frequently followed by most satisfactory results. It is very good to give a small dose of brandy before an anæsthetic is used. It steadies the heart, and causes deeper inspirations to be made, and so more of the anæsthetic is inhaled in a shorter time. The late Dr. Anstie came to the conclusion that 2 oz. of absolute alcohol was the most that an adult should take in twenty-four hours. All wines and spirits are acid, only varying in degree of acidity. A small quantity of beer in many ladies with feeble digestion seems to be very beneficial indeed; food is then taken and enjoyed.

Mr. Munro Smith described a simple experiment carried out at the Medical School. Four beakers, each containing a definite amount of coagulated albumen and a digestive fluid, were placed in a warm chamber. To one beaker was added some port, to another sherry,

to a third claret, and the fourth was left without alcohol. The result was this:

In the beaker without alcohol	...	2 grms	were digested.
,, with claret	...	1 grm.	was ,,
,, ,, sherry	...	·75 ,,	,, ,,
,, ,, port	...	·65 ,,	,, ,,

This shows the effect of different percentages of alcohol on *artificial* digestion; but in the living stomach the process is highly complex, and many other factors have to be considered, *e.g.* the vascularity of the organ, the churning movements and the secretion of HCl.; all these appear to be *increased* by the ingestion of alcohol. On the nervous system the effect of alcohol is clearly not entirely in the direction of paralysis. Physiological experiments show that there is an increased *vascularity* which counteracts or even overpowers the depressing effect; and there is evidence that the brilliant wits of the 18th century were at their greatest mental activity after moderate wine-drinking. The whole question is difficult, and dogmatic assertion on it should be condemned.

Dr. SHINGLETON SMITH commented on the antiquity of the use of alcohol, and thought that a drug which had been so largely and increasingly in use since the times of Noah and of Job had obtained a venerable stability, which doubtless rested upon an excellent foundation. He thought that the physiological variations in the effects of the use of alcohol had not, perhaps, received the attention they deserved; the exaggerated sensibility of the tissues of young people, and the abnormal tendency to fibroid degeneration of various viscera, and more especially the tendency to degenerations of the nerve centres and the peripheral nerves varying much in different individuals, rendered it necessary that in such persons the amount of alcohol should be rigidly limited, and he considered that these pathological conditions were not always evidence of what is commonly called excess. He thoroughly believed in the utility of alcohol as a food, both in health and in disease, and that a moderate use of it in dietetics added largely to the happiness and welfare of mankind.

Dr. MARKHAM SKERRITT thought that with regard to the use of alcohol as a beverage in health, the discussion was tending to take up a retrograde and unscientific direction. For it was surely proved beyond dispute that healthy persons did not require alcohol, and in all circumstances of trial were better without it; and that the only question with them was whether they could take it with impunity because they liked it. The main conditions in which alcohol was useful in disease were: (1) Fevers, with an adynamic tendency. Here the amount that might often be taken with advantage was very remarkable; (2) States of weakness, as for instance in convalescence from acute disease, or in cases of cardiac weakness; (3) Some cases of dyspepsia, where a little alcoholic drink gave a stimulus to digestion; (4) Sometimes, conditions of persistent ill-health in children. The argument derived from the antiquity of alcohol and the Biblical references to it was amusing. It was quite plain that in the old days its reputation was very much what it was now: when the people heard men talking what sounded to them like nonsense, they immediately concluded that they were "full of new wine."

Mr. F. R. CROSS considered that the moderate use of alcohol was desirable. He insisted upon the importance of using only the best forms, and denounced the practice of drinking cheap wines and spirits.

Dr. ARTHUR B. PROWSE said that in regard to the action of alcohol on the heart, it was absolutely certain that in almost all cases, in health

and in disease, the *frequency* of the beats was much increased; but that the evidence on which was based the assertion that it added to the *strength* of the beats was somewhat equivocal. No doubt there was an apparent improvement in this respect; but since the supposed test of this was usually the increased *volume* of the pulse, this is better explained by the undoubted effect of the drug in causing relaxation of the arterial system; which also allowed of the more rapid and easy transference of the blood into the veins. Consequently the pulse is short and soft. But the increase in the rate of beat is inimical to the welfare of the patient, because the diastolic period is appreciably shortened,—giving rise to impaired nutrition, and gradual exhaustion of the cardiac muscle. It is well known that a weak heart, especially in febrile states, tends to be a rapidly-acting one; and we all recognise the immense value which digitalis has, in suitable cases, by slowing the rate of beat, and by lengthening the diastole—thus favouring the nutrition of the muscular tissue, and its power of contraction. While he was Resident Medical Officer at the London Fever Hospital, Sir W. H. Broadbent had told him of an extended trial of the plan of treating *all* the cases admitted, the severe as well as the mild, without alcohol, which had been carried out there some years previously. The result was to show that the cases, with very few exceptions, got on as well without the use of stimulants, as under the then common plan of free stimulation by alcohol. Had time permitted, Dr. Prowse intended to have given some details of two instructive cases, which added to the evidence there is that, even in these days of so-called "Moderation," alcohol is frequently prescribed in toxic doses, which themselves give rise to unfavourable symptoms, — thoughtlessly attributed to the *disease*, instead of to the *drug*. The remark by Dr. Shingleton Smith to the effect that the use of alcohol has "added largely to the happiness of mankind," Dr. Prowse characterised as a most astounding statement; seeing that there is a very general recognition of the fact that the evidence (occasionally denied but never controverted) proves that the use of alcohol has led to an immense amount of misery, disease, and crime. He had come to the deliberate conclusion that it was the duty of medical men to discourage the use of alcohol in health; and to avoid its use in the treatment of disease whenever it was possible to substitute other drugs for it. His personal experience was that this substitution was almost always possible. Was it reasonable to go on freely using a drug which, as Dr. Dickinson had said, was the very "genius of degeneration"?

Dr. A. HARVEY said that although the discussion had treated the question of the use of alcohol both from the therapeutic and dietetic sides, sufficient importance had not been attached to its use in pneumonia, and especially in the lobular pneumonia and capillary bronchitis of children: this is largely due to the action described by Dr. Long Fox of paralysis of the arterioles; the patient is bled into his own arterioles, and so a hampered right heart is unloaded. As a dietetic it is used rather as a sedative than as a stimulant, and the argument that it is not a stimulant is beside the question. The craving for sedatives will be gratified, and if alcohol is debarred, recourse will be had to worse drugs, as morphia and cocaine. Most men will agree with Omár Khayyám:—

> 'That much as wine has played the infidel
> And robbed me of my robe of honour, well
> I often wonder what the vintners buy
> That 's half as precious as the stuff they sell."

Mr. GREIG SMITH, who had not been present at the opening of the discussion, rose specially to express dissent from some of the views

uttered by Dr. Prowse. He hoped that the meeting would be regarded as one of scientists, swayed by no social fads, but simply seeking all through Nature for what would best help them to save life and cure disease. On the face of it, if we desired an honest statement as to the values of alcohol, or opium, or meat, we should not go to teetotallers, or anti-opiumites, or vegetarians. They had prejudged the case from their own points of view, which ought not to be ours. If he thought that a patient of his would die for want of opium, or alcohol, or meat, that patient should be kept alive regardless of consequences from excess in these things. And that he hoped was the feeling of every man practising medicine. To keep a patient from alcohol for fear that he might become a drunkard, or from opium for fear that he might become an opium-eater, when alcohol or opium might have saved the patient's life, was, in his opinion, contrary to the true spirit of medicine. Further, abstention was a question of conscience and morality on the patient's part; the surgeon or physician used the best remedy he had, and if thereby he saved life his responsibility ceased. As a matter of fact patients treated freely by any drug during an acute illness were usually nauseated by that drug; this was a fortunate fact, but no real argument. If the patient's life was saved at the expense of his becoming an alcoholic or opium *habitué*, still he thought the result worth the risk. Dr. Shingleton Smith had stated that, on the whole, he believed that the human race were the happier if not the better for wine. Dr. Prowse had expressed his emphatic disapproval of this statement. Mr. Greig Smith heartily endorsed the opinion of Dr. Shingleton Smith, and made various quotations from poets in support of his belief. He did not believe that drink was a very prolific cause of crime. The criminal was not a drunkard, his art did not permit of drunkenness; and the drunkard was not a criminal. The drunkard was an idle, stupid or careless ne'er-do-weel who might beat his wife (who may well have deserved it), but his brains were not equal to real crime. If he had a tendency to criminality, drunkenness would render him incapable of putting it into practice. In his practice Mr. Greig Smith gave less alcohol, and more, than most men. In ordinary cases he gave none. In bad cases he gave simply as much as the patient could absorb, and if the stomach were incapable of absorbing he gave it by the rectum. And in convalescence, particularly if prolonged, he knew nothing more valuable than really good Burgundy or port. Statistics of mortality regarding total abstainers and alcohol-drinkers were absolutely valueless, for they ignored other essential elements. They included children: that was a most disturbing factor. They took cognisance of the atrophic, perennial and uninteresting individual who wore the blue ribbon, and of the miserable, diseased creature who, while not a drunkard, tried to drown his cares and diseases in alcohol. Neither are drinkers, but the one dies before the other. And thus, if duration of life is to be the criterion of worthy manhood, and alcohol is to be the gauge, the teetotallers have it. The centenarian paupers (and of these there are many) are then to be encouraged at the expense of our early-dying Shelleys and Burnses (of whom there are few). To save life, to abjure humbug, to promote liberal and humane existence were, in Mr. Greig Smith's opinion, more important than to become abstainers from alcohol, to subscribe to creeds, and to pervert science. He believed alcohol to be one of the most valuable drugs in the Pharmacopœia, and he considered wine to be a real influence for good in living and thinking and ordinary work. Both in medicine and in ordinary life wine, like most other things, was occasionally abused. *Ex abusu non arguitur ad usum.*

Mr. JOHN EWENS, referring to Mr. Greig Smith's observation that

he was not responsible for the after-abuse of alcoholic drinks because he had to administer, in extreme cases of abdominal or other operations, large quantities of brandy, said he had never seen any such results, but rather a distaste was created by its free use under such circumstances. Mr. Ewens protested against the injudicious administration of wine, etc., to young women for attacks of depression, or low spirits, as he had seen many cases of intemperance induced thereby in after-life. He also objected to administer alcohol in any form to reclaimed drunkards when ill, as it was pretty certain to excite the old craving for it again. He believed that, generally speaking, the best, most lasting, and useful mental work was done by men who were total abstainers.

Dr. AUST LAWRENCE drew attention to the fact that in women between 35 and 45 years of age profuse menorrhagia was often caused by the immoderate use of stimulants. Excessive use of alcohol often was the cause of sterility in women otherwise perfectly healthy. Gin and water should not be given as a remedy for the pain at menstruation. In such cases a doctor should always be consulted. As an aid to lactation, the moderate use of stimulants to which a woman may be accustomed is of benefit; but it is no use to give her an extra amount with the idea that this will increase the amount of milk. In cases of septic *post-partum* troubles the free use of stimulants was always of very great service; as much as 10 to 20 oz. of brandy should be given in twenty-four hours.

Mr. DACRE, in reply, first commented upon the remarks of Dr. Fox, and with all deference begged to differ from him in principle. He considered that the statistics of Life Insurance Offices did not carry with them complete conviction against drinking in moderation. He could not agree with those speakers who would never give alcohol in cases of *delirium tremens*. He had frequently had practical evidence of its utility in such cases, and to assist the action of appropriate sedatives he would without any hesitation prescribe it again. Mr. Dacre joined issue with Mr. Ewens in not giving alcohol to a patient during illness who was addicted to intemperance. He considered that such a man would at such times require more than any other a due allowance of alcoholic stimulant. In conclusion, he thanked the members for the kindly way in which his paper had been received, and for the lengthy discussion which had followed.

February 12th, 1896.

Dr. A. J. HARRISON in the Chair.

Dr. SHINGLETON SMITH showed two patients: (1) A boy, aged 7, who was admitted to the Bristol Royal Infirmary on November 18th, 1895, in consequence of diffuse scleroderma. He is the eldest of a family of five, all healthy. He has had measles and chicken-pox, but not scarlet fever; he has been subject to colds and has had swellings in the neck; he had what appears to have been eczema of the scalp at six months. His mother, on the day before his admission, whilst washing the child in the morning, noticed that his skin was unnaturally hard, and she is quite sure that it was not so previously. He is a healthy-looking boy, well nourished and intelligent. Weight 3 st. 10 lb. Temperature normal. The condition of skin in nearly all parts of the body is glossy, smooth, and to the touch remarkably brawny; and the face and extremities have the appearance of being swollen, although there is no œdema. The skin cannot be pinched up between two

fingers. The face is immobile and manifests a lack of expression, but all the movements are performed without difficulty or discomfort. The eyelids are less tense than other parts, and can be opened and closed easily. The mouth can be opened widely, and the mucous membrane of cheeks and tongue is affected as the skin, but there is no difficulty in protrusion and other movements of the tongue. The limbs are all affected, and in all parts except the palms of the hands and the soles of the feet. At the flexures of the joints there is less induration than on the extensor surfaces, and the thighs are less brawny than the legs. The chest-wall is affected, but the movements of respiration are not hampered. There is no abnormal dryness of skin, no scaliness, pigmentation, or scars. There is no trace of albumen in the urine, and there are no indications of congenital syphilis. The thyroid appears to be normal. The condition does not produce any disability, and there are no indications of any complication like Raynaud's disease. The one thing present appears to be connective tissue overgrowth. Jaborandi had no effect whatever: doses of six drachms of infusion had no action on skin or mouth. Thyroid tabloids, two to four in the day, were given for four weeks with no effect. Massage has been continued for five weeks, and the boy appears to be somewhat improved, although the characteristic scleriasis is still present. (2) A man, aged 30, suffering from chronic chorea. The affection, of twenty years' duration, is one of muscular spasm of local athetoid type, the leading feature being a bilateral spasmodic torticollis, with an extraordinary degree of muscular hypertrophy, traumatic in origin, with no history of hereditary neurosis and no connection with rheumatism. (A full report of this case will be published in a future number.)—Dr. HENRY WALDO drew attention to the suggestion that a case of a general scleroderma resembles a frozen corpse without the coldness. He said that the sudden onset fitted in with the generally accepted theory of the pathology of the disease; namely, an obstruction of the arteries, veins, and lymphatics, probably depending upon a vaso-motor lesion high up. He considered that the case shown had very much improved since he first saw it, about three months ago.—Dr. BERTRAM ROGERS thought that the case was allied to the condition known as sclerema neonatorum, in which nodules were found subcutaneously. The condition was observed generally in children in whom a history of syphilis could be obtained, and this might account for the pathology of the disease. He asked whether any symptoms arose during the thyroid feeding, as he had given large doses to children for various complaints and had never seen any trouble arise like that he had observed in overdosing adults. He presumed that there were no symptoms of Graves's disease, though hypersecretion of the thyroid gland was now stated to be one of the causes of the disease.—Dr. MICHELL CLARKE considered the second of the two very interesting cases shown by Dr. Shingleton Smith to be an example of the severer form of spasmodic torticollis, in which the spasm commencing in the neck had spread to the arms and shoulders. The history of onset, mode of extension to neighbouring muscles, character of the spasm, associated action of occipito-frontalis accompanying spasm of deep muscles of back of neck, were in favour of this view; as was also the absence of any sign of organic disease of the central nervous system. Chorea he considered excluded by the history and characters of the disease, and absence of family or personal history of rheumatism, or sign of cardiac disease. The rarer forms of chorea could be similarly excluded. Dr. Clarke made some remarks on two similar cases in men of 48 and 67 years of age, whom he had had under his care, and on the intractability of this severe

form of the disease to treatment.—Dr. SMITH, in reply, observed that he was quite willing to accept the suggestion that the case is really one of long-standing bilateral spasmodic torticollis, with excessive overaction and hypertrophy, and suggested that division of the spinal accessory nerves might be of benefit.

Dr. MICHELL CLARKE showed a case of tabes dorsalis in a man, aged 21, the subject of hereditary syphilis. He had never acquired syphilis. The symptoms were of eighteen months' duration: the chief were Argyll-Robertson pupil, loss of knee-jerks and plantar reflexes, static and motor ataxia in legs, lightning pains and some defect of sensation in legs. Dr. Clarke also showed a man, aged 39, suffering from fibroid disease of left lung, who had been ill four years. Symptoms had greatly improved under intra-laryngeal injections of creasote and olive oil. He also mentioned the case of a girl, aged 13, with a similar condition in the right lung, who had derived great benefit from the treatment.

Dr. WALTER SWAYNE described: (1) A case of uterus bicornis in an unmarried patient, aged 18, who was suffering from profuse leucorrhœal discharge and dysmenorrhœa. She was a well-developed girl, but inclined to anæmia. There was the scar of an operation wound visible on abdomen. She had undergone abdominal section and ventrofixation of the retroflexed uterus. An American surgeon had found the uterus bicornuate, and sutured the larger horn to the abdominal wall. The condition was one of great importance in relation to menstruation with possible obstruction of one horn, and in pregnancy when rupture of the horn might occur. The uterus was found to be bicornuate and anteflexed. The left cornu was much the larger and in contact with abdominal wall, the right cornu apparently springing from it and pointing in a transverse direction. A Fallopian tube was felt at the angle of each cornu. The ovaries could also be felt. Sound passed 2½ inches into right cornu. A purulent discharge was observed coming from a sinus just in front of cervix at junction of cervical and vaginal mucous membrane. A probe was passed into utero-sacral ligament, the sinus dilated, and chloride of zinc (10 grs. to ℥j.) applied and drainage tube inserted. The patient was well a week later. (2) Two cases of absence of uterus: (*a*) A patient, aged 25, had been married seven years. She sought advice on account of sterility, and pain in the abdomen accompanied by slight swelling recurring each month. She was a well-developed woman. The breasts and external organs were normal: the pubic hair did not extend over abdomen. The vagina was normal in width, 3½ inches long, but terminated in a *cul-de-sac*. No trace of cervix or uterine body. Both ovaries were present, and a septum (probably broad ligament) could be felt running across pelvis, and in the centre of which was a very indefinite thickening (probably undeveloped tissue representing uterus). The question of oöphorectomy to relieve her menstrual pain was put before her, but the condition did not appear to be sufficiently acute to justify operation. Her sexual relations were normal. (*b*) A patient of Mr. Greig Smith's, unmarried, aged 17. Well developed externally, but with no trace of vagina or uterus. Right ovary could be felt fairly easily, left only very indistinctly. She had been sent to Mr. Greig Smith to be operated on for vaginal atresia, but in the absence of a uterus any operation appeared unjustifiable.—Dr. AUST LAWRENCE said that during twenty-one years at the Bristol General Hospital one woman had come under notice in whom there was absence of uterus and ovaries. She had no menstrual molimen. The vagina was about half-an-inch in length. He had had under his care a case of uterus bicornis in which one os uteri was

patent. On the other side there was no os. This half of the uterus became distended with menstrual secretion and caused a large tumour to form, occupying the posterior half of the pelvis and rising up into the abdomen. With antiseptic precautions this swelling was opened in the vagina. The patient did well until the tenth day, when symptoms of collapse suddenly set in and death took place. The necropsy showed that the Fallopian tube had torn away from some adhesions, and the escape of blood into the pelvis produced shock and death.

Dr. A. J. HARRISON read notes of the case of a man, aged 27, a tripe-dresser, who was admitted into the Bristol General Hospital on September 30th, 1895, with symptoms and history which rather pointed to cirrhosis of the liver, but which after death proved to be malignant (alveolar sarcoma) disease of the transverse colon, with secondary deposits in mesenteric glands and liver. On admission the man had no jaundice; no ascites; no albuminuria; no marked cachexia; no diarrhœa; no hæmatemesis; no melæna; no distension of abdominal veins; very little pain; only occasional sickness; no pyrexia on admission; but he had an enormous liver. This enlargement increased rapidly, and on November 21st he died rather suddenly, œdema of legs and some little ascites having come on a few days before. The liver weighed 20 lbs. 6½ oz.

J. PAUL BUSH, *Hon. Sec.*

Cardiff Medical Society.

January 3rd, 1896.

Dr. D. EDGAR JONES, President, in the Chair.

Mr. J. LYNN THOMAS showed a specimen of chondro-sarcoma of the testis and epididymis which he had removed from a man thirty-five years of age. He also exhibited a large fibroma of the ovary. The tumour weighed 5 lbs. 8 oz. It contained two large papillomatous cysts. It had been tapped five times within the last few years, and the adhesions were very extensive. The patient made a good recovery.

Dr. R. S. STEWART entered more fully into several of the points which at the last meeting he had brought forward in his paper on the increase of general paralysis of the insane in England and Wales. He discussed the view that syphilis was a prominent factor in the causation of general paralysis, and pointed out the great difficulty of obtaining trustworthy data on this point. The discussion was joined in by several members.

February 7th, 1896.

Dr. D. EDGAR JONES, President, in the Chair.

Dr. TATHAM THOMPSON exhibited a patient in whom he had performed Mules's operation for ptosis. The patient, a girl of sixteen, had suffered from congenital ptosis of one eye. The result was excellent, the lifting of the upper lid above the corneal margin being well marked, and no discomfort was complained of, the wound having healed over the silver suture.

Dr. RHYS GRIFFITHS showed the following specimens: (1) A gum elastic catheter with stilet, which he had removed from the male bladder, where it had lain some time. (2) A Zwancke's pessary. This had been inserted by a medical man in the vagina two-and-a-half

years before for prolapse of the uterus, and had never been removed. The patient came complaining of incontinence of urine, and it was found that the pessary had ulcerated into the bladder. It was removed with difficulty and found to have the wings much eroded. (3) A fœtus, in which the abdominal wall was deficient. This had caused considerable difficulty in recognising the presentation. (4) A brain from a case in which the lateral ventricles had been tapped. The patient had complained of symptoms pointing to the presence of cerebellar tumour, for the relief of which the skull was trephined. A trocar was passed into the ventricle and fluid withdrawn. Two or three hours later, signs of respiratory failure set in and death took place. On *post-mortem* examination, recent hemorrhage into the lateral ventricles was found. The tumour was a glioma, involving the corpora quadrigemina and the adjacent parts.

Mr. C. A. GRIFFITHS read a paper on the "Surgery of Empyema." He advocated free incision of the pleural cavity combined with the resection of ribs, and exhibited a tube which he had devised for draining the pleura, and in which there was an arrangement for making it self-retaining.

D. R. PATERSON, *Hon. Sec.*

Devon and Exeter Medico-Chirurgical Society.

February 21st, 1896.

Mr. J. D. HARRIS, President, in the Chair.

Dr. C. N. LOVELY showed a case of congenital deformity in a child aged about three. In the left hand the index and middle, and also the ring and little, fingers were webbed together. The thumb was normal. In the left leg the tibia and fibula were normal; there was a rudimentary astragalus, but all the rest of the foot was absent. On the right side there was an intra-uterine amputation of the right arm above the elbow, and also of the right thigh above the knee. The child was intelligent. It walks on the left knee and right stump. There was a history of the mother having been frightened by an Ostend or skinned rabbit, and Dr. Lovely suggested the theory of maternal impression.

Dr. R. V. SOLLY showed a case of multiple lipomata.

The PRESIDENT showed a specimen of dermoid cyst of ovary with a tooth *in situ*.

Mr. A. C. ROPER showed a specimen of carcinoma of the sigmoid flexure.

Mr. A. C. ROPER read a paper on "Perineal Pressure in Cycling." He first mentioned some anatomical points bearing on the question, and he then described how he himself had suffered from retention of urine and cystitis from this perineal pressure. He then exhibited various kinds of saddles, and discussed their individual advantages and disadvantages, and finally he showed a saddle he himself had designed. Saddles, he said, might be divided into seats and saddles. The seats had no peaks extending between the thighs, and consisted of cushions, pneumatic or otherwise, with depressions for the tubera ischii. There could be no perineal pressure, but it was extremely difficult to remain in the seat while riding. The saddles were either treed or suspended, and he recommended the suspension saddle. It should be horizontal, with a perineal slit in it, and must be capable of a slight tilt backwards if necessary.

R. V. SOLLY, *Hon. Sec.*

Torquay Medical Society.

December 18th, 1895.

Mr. P. Q. KARKEEK in the Chair.

Mr. C. H. WADE read a communication on "Medical Defence." After the discussion which followed, a resolution was put and carried unanimously to the effect: "That it is desirable in the interests of general practitioners that the British Medical Association should include medical defence as a branch of its organisation."

Mr. G. YOUNG EALES showed: (1) A periosteal tumour of the shaft of the femur, associated with effusion of fluid into the knee and absence of knee-jerk on both sides. (2) A case of lymphadenoma.

February 19th, 1896.

Dr. REGINALD POLLARD, President, in the Chair.

Mr. G. YOUNG EALES showed an unusual case of epithelioma of the mouth, and also read a communication on "Influenza."

G. YOUNG EALES, *Hon. Sec.*

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in December:

February 29th, 1896.

Bootle Public Library Committee (1)	75 volumes.
F. R. Cross (2)	20 ,,
George M. Gould, M.D. (3)	5 ,,
L. M. Griffiths (4)	11 ,,
Council of the Ophthalmological Society (5) ...	13 ,,
Mrs. R. B. Ruddock (6)	1 volume.
E. J. Sheppard (7)	53 volumes.
J. Greig Smith (8)	1 volume.
R. Shingleton Smith, M.D. (9)	5 volumes.
The Surgeon-General, United States Army (10)...	1 volume.
P. Watson Williams, M.D. (11)	1 ,,

NINETEENTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

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Local Medical Notes.

BATH ROYAL UNITED HOSPITAL.

G. A. Bannatyne, M.D. Glasg., has been appointed Physician in the place of Dr. Biddlecombe resigned.

G. E. Bowker, M.B. Edin., has been appointed Honorary Assistant Medical Officer.

UNIVERSITY COLLEGE, BRISTOL.

The following appointments have been made:—*Professor of Pathology and Morbid Anatomy*—J. Michell Clarke, M.A., M.D. Cantab, M.R.C.P. *Lecturer in Practical Midwifery*—Walter C. Swayne, M.D. Lond. *Lecturer in Practical Physiology and Histology*—F. H. Edgeworth, B.A., M.B., B.C. Cantab, B.Sc. Lond.

The following students of University College have passed examinations:

University of London.—Intermediate Examination. *Physiology only*—First Class, H. T. S. Aveline. Second Class, N. S. V. Stock. Honours, J. H. Bodman (Third Class in Medicine, Second Class in Obstetric Medicine).

Examining Board in England by the Royal Colleges of Physicians and Surgeons.—First Examination, January, 1896. Part I. *Chemistry and Physics*—H. Hemsted, J. C. Norton, L. A. Moore, C. F. Walters. Part II. *Practical Pharmacy*—K. H. Beverley. Part III. *Elementary Biology*—J. C. Clayton. Second Examination. *Anatomy and Physiology*—W. T. Lord. *Physiology*—E. G. Bunbury. Third Examination. *Surgery*—C. A. Dykes, W. R. Gwynn,* J. C. Macwatters, G. E. F. Stammers.* *Midwifery*—E. R. Woodford.

* Completes Examination.

Society of Apothecaries.—Pass List. December, 1895. *Medicine, Forensic Medicine, and Midwifery*—A. T. Morgan. *Medicine*—J. H. R. Pigeon. *Forensic Medicine and Midwifery*—E. R. Bowen.

Indian Medical Service.—A. E. H. Pinch.

BRISTOL GENERAL HOSPITAL.

W. J. Penny, F.R.C.S. Eng., has been appointed Consulting Surgeon.

R. G. Poole Lansdown, M.D., B.S. Durh., has been appointed Surgeon.

J. Lacy Firth, M.D., M.S. Lond., F.R.C.S. Eng., has been appointed Assistant-Surgeon.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.

John Dacre, M.R.C.S. Eng., has been appointed Consulting Surgeon.

The following gentlemen have been appointed to hold office for one year:—

Assistant-Physicians—T. Fisher, M.D. Lond.; C. E. Williams, M.D. Cantab.

Assistant-Surgeons—C. A. Morton, F.R.C.S. Eng.; W. H. Kendall, M.R.C.S. Eng.

Registrar—John S. Griffiths, M.R.C.S. Eng.

CLIFTON SPA.

A very decided attempt is being made by Sir George Newnes to revive the faded, if not extinguished, glories of the old Hotwells spring. When the British Medical Association met here in 1894, the Pump-room was opened; but owing to numerous difficulties arising, all work ceased, both in building the baths and converting the existing houses into the Hydropathic Establishment. A company to run the concern has now been started, and we hear that no difficulty has been experienced in obtaining the necessary capital. When completed the whole place will equal, if not excel, any similar "Hydro" in the United Kingdom; for the baths—of which we have seen the plans—will be of the most recent and approved pattern.

We have been so accustomed to look upon the pump situated in a cave at the base of St. Vincent's rocks as the original well, that it came as a surprise to us to hear that Sir George had secured the real original well and was supplying its water at the Pump-room, free from contamination of the not too clean tidal waters of the Avon.

At the end of the last century the Hotwells was second only to Bath in popularity. From various accounts that we have seen two causes appear to have led to its decadence. Firstly, the inordinate rent imposed by the Merchant Venturers, the lords of the manor; and, secondly, the building of Clifton. All the big crescents were built during the last ten years of the eighteenth century, and Granby Hill—described by one physician as a dangerous and precipitous tract—was the only communication between the Hotwells and Clifton, and too exhausting for the invalids to descend and ascend three times a day. In a very short time the place was deserted; the Hotwell house fell out of repair, and was pulled down in 1822 when the Bridge Valley Road was made. An attempt was however made soon after to recall the visitors. A new and imposing house was built in "the Tuscan style"; but the opportunity had been lost, and the house continued its somewhat precarious existence till the year 1867, when it in turn was pulled down in order that the navigation of the river might be improved by removal of the Hotwells point. There are numerous

interesting facts in connection with the popularity of the well, that we could, if space permitted, recount, and many contemporary writers and novelists (Fanny Burney, Smollett, &c.) describe, no doubt from personal experience, the gaieties and follies of the times. One peculiar phenomenon alone we will notice. On November 1st, 1755, the water of the well became turbid and red, while the ebbing tide flowed back. No one could account for this remarkable fact, till some time after when the news of the disastrous earthquake at Lisbon was reported.

THE NEW "PHOTOGRAPHY."

On February 10th Mrs. L. consulted Mr. T. F. Edgeworth on account of pain in the front of the right wrist, due, she thought, to a needle which had accidentally penetrated the skin. There was some tenderness on pressure, but nothing further could be made out. Before any exploratory incision was made, Professor Wertheimer, the Principal of the Bristol Merchant Venturers' College, very kindly made a radiogram by Röntgen's rays. It showed the needle quite distinctly.

A few days subsequently, after an injection of cocaine, the needle was easily removed. The radiogram was of great assistance in showing that the needle was there, and also its exact position, so that an incision could be made just over the upper end of it.

This is the first case in Bristol in which surgical use has been made of the discovery.

SCRAPS

PICKED UP BY THE ASSISTANT-EDITOR.

Clinical Records (14).—Patient: "All my money cannot give me health, doctor!" Doctor (of a bygone age): "No, perhaps not; but it is of inestimable value, nevertheless. It gives your physician great confidence."

Medical Philology (XVII).—The word "Chitlings" used in certain ranks of society to denote parts of the intestines, mesentery, and omentum of the pig is only another form of the good Middle English word "Chitterlings," which in the *Promptorium* (1440) is met with as "Chytyrlynge, *Scrutellum, scrutum*" [1], taken by its compiler from some work by Robert Kilwardby, who was Archbishop of Canterbury from 1227 to 1278. The *Catholicon* (1483) has "a Chiterlynge; *hilla*." [1] The word was in common use, as may be seen from the instances given by Mr. Way, Mr. Herrtage, and the *New English Dictionary*, some of which I copy. Horman in his *Vulgaria* (1519) says: "let us have trypis, chetterlyngis, and tryllybubbys ynough." Palsgrave's *Esclarcissement* (1530) gives "Chyterling, *endoile*" In Cooper's *Thesaurus* (1532) "a small gutte or chitterlyng salted" is the equivalent of "hilla." Sir Thomas Elyot in the *Castel of Helth* (1533) speaks of "the inwarde of beastes, as trypes and chytterlynges." Mr. Herrtage says that in the *Nomenclator*, which I presume is the 1548 hexaglot vocabulary mentioned by Mr. Way on p. lxxix. of the Appendix to the *Promptorium*, we find "a haggise; some call it a chitterling, some a hog's harslet." Levins, in the *Manipulus Vocabulorum* (1570), has "A chyttering, *omasum*. A chitterling, *idem*." Baret, in his *Alvearie* (1573), gives "a chitterling, *omasum;* a gut or chitterling hanged in the smoke, *hilla infumata*." In Dekker's *Honest Whore* (1604) Fustigo speaks of a meal of "Calves chaldrons, and chitterlings" (ed. Pearson, 1873, vol. ii. p. 40). In Cotgrave (1611) the English of "andouille," which is the same word as Palsgrave's "endoile," is given as "a linke, or chitterling; a big hogges gut stuffed with small guts (and other intrailes) cut into small pieces, and seasoned with pepper and salt." Cotgrave has also "*Friquenelles;* slender, & small chitterlings, or links." Sherwood's English-French addition to Cotgrave gives the French equivalent of chitterling as "le gras boyau," which Cotgrave says is called in beasts "the Inche-pinne, or Inne-pinne." In *Hudibras* (1663) will be remembered the passage (I. ii. 119-22):

> His warped ear hung o'er the strings,
> Which was but souse to chitterlings:
> For guts, some write, ere they are sodden
> Are fit for musick or for pudden.

The word was also used metaphorically. It was applied to ruffs generally, and more especially to the frill of a shirt which bore some resemblance to the mesentery. In the play *Like Will to Like* (1568), Newfangle says: "I learn'd to make ruffs like calves' chitterlings" (Dodsley's *Old English Plays*, ed. Hazlitt, vol. iii. p. 310). In Dyche and Pardon's Dictionary (1750) Chitterlings are defined as "the inwards, or hogs guts dressed for food, which are much shrivelled or curled up; from whence the cambrick ornaments worn upon the shirts of most men at this time are so called, because of their being gathered in folds and plaits." Anstey in his *New Bath Guide* (1766) mentions "a chitterlin shirt" (Letter xi.). Other instances of the word in its material and figurative senses are given in the *New English Dictionary*.

The chaldrons or chawdrons mentioned in the quotation from Dekker were also portions of the entrails of a beast. "A tiger's chaudron" was part of the ingredients of the witches' cauldron (*Macbeth*, IV. i. 33).

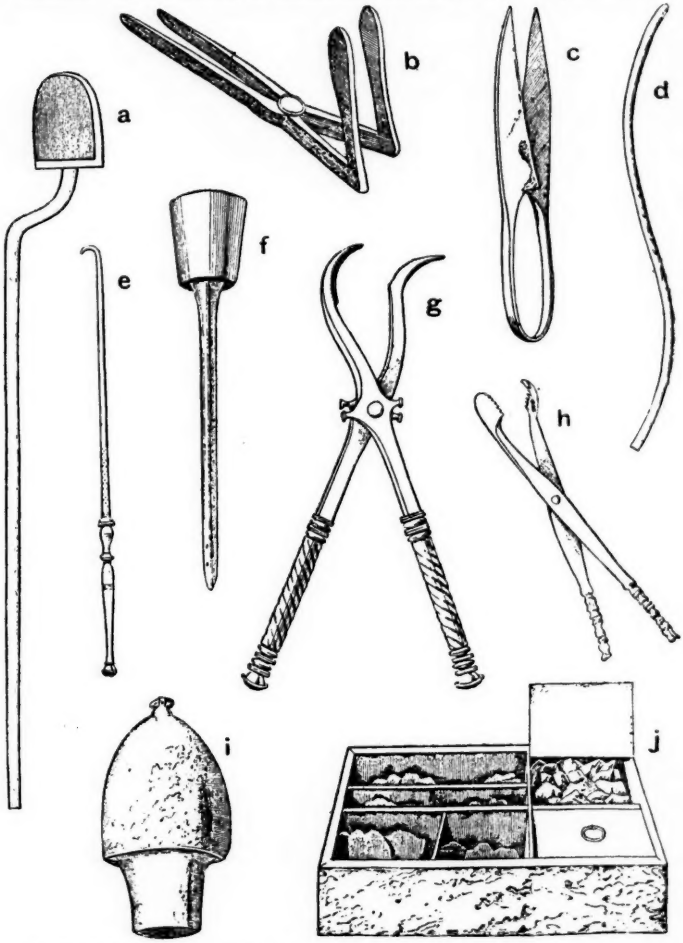
The etymology of chitterling and of chawdron is obscure. Chitterling may be allied to the German *Kuttel*, entrails.

[1] A *Nominale* of the fifteenth century gives "*Hoc scrutum*, a trype" and "*Hec hilla*, a sawstyre" (Wright's *Vocab.* 2nd ed., 678.4 and 741.25). Sawstyre signified a sausage. Lewis and Short do not give "scrutum" or "scrutellum," but "scrutellus" is defined as "a pork-sausage." They give "hillae" as "the smaller and anterior intestines of animals (other than men and sheep)," and refer to Horace (*Sat.*, II. iv. 60)—

> "pernâ magis ac magis hillis
> Flagitat in morsus refici,"

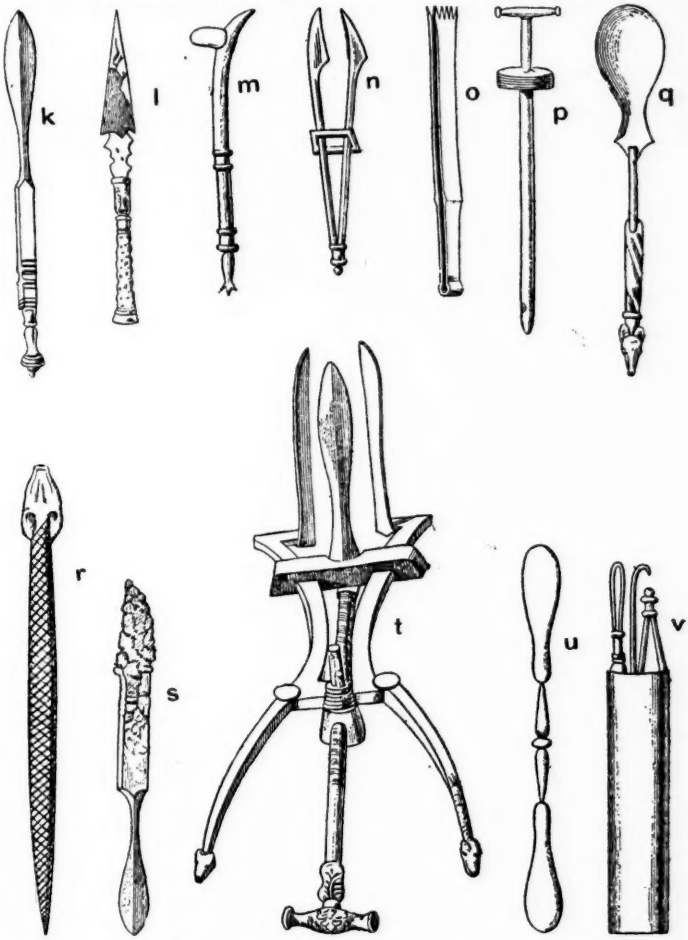
where the word is usually translated "sausages."

Surgical Instruments of Antiquity.—Under the title of "Pompeian Surgery and Surgical Instruments," Dr. N. Senn has a very interesting paper in the *Medical News* of December 28th, 1895. In June and September of last year I had, amongst the "Scraps," some notes on the instruments in the Naples Museum. By the courtesy of Messrs. Lea Brothers & Co., the publishers of



the *Medical News*, I am enabled to give a reproduction, on a reduced scale, of the illustrations which accompany Dr. Senn's paper. The instruments were found in a house now known as the "Surgeon's House." This was overwhelmed when Pompeii was destroyed in the year 79. Some of the instruments show the destructive effects of the heat and oxidation. I append extracts from Dr. Senn's description of the instruments depicted: **a.** Actual cautery. Length 10 in. **b.** Bivalve speculum. Length 6 in.; width, when open, 2½ in.

c. Scissors. Length 4 in. **d.** Male catheter. Length 10½ in. **e.** Hook. Length 6 in. **f.** Point of injection-syringe. Length 6 in. **g.** Forceps, each branch fitted with an engine-turned handle and a spoon-shaped blade. Length 8 in. **h.** Forceps, with serrated bite. Length 4½ in. **i.** Cupping-glass of bronze. Height 6 in., diameter 3 in. **j.** Medicine-box with medicines, 5 in. by 3 in.



k. Spatula for mixing ointments. Length 7 in. **l.** Lancet for bleeding. Length 5 in. **m.** Fleam for bleeding horses. Length 5½ in. **n.** Forceps. Length 4¼ in. **o.** Toothed dissecting-forceps. Length 7½ in. **p.** Trocar. Length 5 in. **q.** Small spoon with bone handle. Length 5½ in. **r.** Female catheter. Length 4 in. **s.** Bistoury. Length 5⅜ in. **t.** Trivalve speculum. Length 8¼ in.; widest expansion of valves 1½ in. **u.** Spatula. Length 7 in. **v.** Metallic case with instruments. Length 8 in. by ⅜ in.

The "Bitter Cry" of the Physician.—A subscriber to this *Journal*, after reading a late utterance, and some recent correspondence, on Abdominal Surgery, has come to the conclusion that "the greed of the surgeon is becoming intolerable." He gives vent to his feelings by sending the following:

It may be long since surgeons first
  Took "barber" as a name;
Yet style and practice, even now,
  Are seemingly the same:
The noun replaced by adjective;
  How small the change we crave!
They still are known as "barbarous,"
  And patients have a "shave."

Doubtless the operating surgeon will have something to send by way of reply.

The Profession as viewed by the Public.—In an address with this title Dr. C. Ellery Stedman said: "The family doctor is dead and buried. The specialists have squeezed him out as the vines do the big trees. Christian Science cannot resurrect him. A man told me at the club the other day, that when he quit his house that morning he left there three doctors; one was seeing his wife, one was dressing a sprained ankle, and the third was poking things into a boy's ear. It was all right—they were all three first-rate fellows, and he was glad to see them; but he sometimes wondered if the old institution of the family doctor—who did all those things well, if not elegantly—were not preferable, as it was certainly less expensive. On this, another gentleman, with grown children, said that he never meant to have a family doctor; he held himself free to call in any one he pleased. Some time since, on the occasion of illness at home, he sent for Dr. B, instead of Dr. A, the man whom he usually consulted—not for any particular reason, but because he wanted to. He was surprised to learn, later, that Dr. A had sent for Dr. B, and taken him soundly to task for answering the call. To the gentleman's question if he had done any wrong, I replied that he had a perfect right to send for any one he chose, that Dr. B was perfectly right in responding to the summons, and that Dr. A was not unreasonable in feeling hurt, that, after his services in the family, he had to realize that he was not indispensable, but he was wrong in scolding Dr. B. Moreover, he should have reflected that if Dr. B had not answered the message, the patient would have been vexed with both, and called in Dr. C, who would have been only too glad of the chance to oust either or both of them."—*Boston Medical and Surgical Journal.*

Obstetrics Home and Foreign (1).—It should seem that the expression of *the lady in the straw*, meant to signify the lady who is brought to bed, is derived from the circumstance that all beds were anciently stuffed with straw, so that it is synonymous with saying, "the lady in bed," or that is confined to her bed. Some have thought, but I cannot be induced to accede to the opinion, that the term "lady in the straw" takes its rise from *a straw mattress* necessarily made use of during the time of delivery. In the Child-bearer's Cabinet, in "a rich closet of physical secrets collected by the elaborate paines of four severall students in physick," 4to. no date, p. 9, we read: "How, and wherewith the child-bed woman's bed ought to be furnished. A large boulster, made of linen cloth, must be *stuffed with straw*, and be spread on the ground, that the upper part may lye higher than the lower; on this the woman may lie, so that she may seem to lean and bow, rather than to lye, drawing up her feet unto her, that she may receve no hurt."—Brand's *Popular Antiquities*, ed. Bohn, 1849, vol. ii. p. 66.

The Japanese make their preparations for the coming event in the seventh month, so as to be sure of being in time. The bed which they then provide consists of a mat of straw about three feet square, on which is spread a layer of cotton or cloth. This simple arrangement upon which the patient is to be delivered is then set aside to be available at any emergency. At the time of labour this mat is arranged so that the woman may sit on it with her legs under her thighs. A portion of the mat is bent to form a back for her, and is supported by cushions. The sitting position is retained for about three days after the birth of the child.—Engelmann's *Labor among Primitive Peoples*, 1882, pp. 38, 129, 178.